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# AGRICULTURAL OUTLOOK

April 1990

United States Department of Agriculture

WASH., D.C. 20551

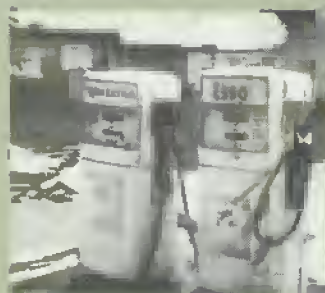
Food Aid Flowing to  
Eastern Europe, page 16



# AGRICULTURAL OUTLOOK

## Departments

- 2 Agricultural Economy  
Trade Lib: The Bottom Line
- 12 Commodity Spotlights  
Saudis Aim To Cut Wheat Exports  
Milk: Time for Component Pricing?
- 16 World Agriculture and Trade  
EC Spearheads Aid to E. Europe  
U.S.-Canada Corn-Broiler Dynamics
- 21 Farm Finance  
Farm Income Steady In 1990  
Farmer Mac Ready To Go  
Payments Go to Largest Farms
- 27 General Economy  
Expansion Likely To Continue
- 30 Resources  
The CRP & Wildlife Habitat
- 32 Policy  
Pesticide Regulations In Flux



## Special Articles

- 35 GATT Talks: No Outcome Yet
- 39 Mandatory Seafood Inspection in the Offing?

## Statistical Indicators

- 43 Summary Data
- 44 U.S. and Foreign Economic Data
- 45 Farm Prices
- 46 Producer and Consumer Prices
- 48 Farm-Retail Price Spreads
- 49 Livestock and Products
- 53 Crops and Products
- 58 World Agriculture
- 59 U.S. Agricultural Trade
- 62 Farm Income
- 66 Food Expenditures
- 66 Transportation
- 67 Indicators of Farm Productivity
- 67 Food Supply and Use

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## News of 1990 Farm Income, Pesticide Bills, Seafood Inspection

**T**he U.S. cash farm income picture for 1990 has improved somewhat compared with USDA's earliest projections for the year, made last November. Combined with continuing strong demand for agricultural products, currently higher prices due to tighter corn stocks and smaller hog inventories have brightened the outlook.

A gain of \$2-\$8 billion in cash receipts and perhaps only a slight increase in cash expenses underlie the income prospects. Net cash income could grow about 6 percent, from \$53 billion in 1989 to \$54-\$58 billion this year. Net cash income measures the value of commodities sold in a calendar year plus government payments, less out-of-pocket costs.

Net farm income is expected to be \$45-\$49 billion this year, steady to down 8 percent from last year. Net farm income measures the value of agricultural production in a calendar year plus government payments, less all costs. Net farm income may drop as feed grain prices ease from the spikes caused by the 1988 drought. The lower prices will dampen the value of this year's fall harvest. Much of the fall harvest will be sold in 1991.

Improved weather has brightened prospects for the 1990/91 U.S. winter wheat crop. Early indicators in Western Europe, Canada, and Australia point to wheat production gains there as well. Wheat prices are falling.

Asian rice producers are harvesting a bumper crop in 1989/90; record or near-record output is forecast for China, Bangladesh, Vietnam, Thailand, and India. U.S. stocks are low and the Thais are holding stocks back for sale later in the year. So, prices remain strong and U.S. exports are slowing.

Increasing poultry supplies may push retail prices below last summer, giving consumers relief from rising pork prices.



Retail beef prices likely will remain near last year's highs through the second and third quarters. Milk and egg prices probably will decline in 1990 as recent favorable returns stimulate production.

Several bills now pending in Congress aim to speed EPA's reaction time when there is evidence that a pesticide creates an unreasonable risk to human health or the environment. The bills also seek to adjust and standardize the criterion by which pesticides used on food crops would be evaluated, setting "negligible risk" as the new standard for potential carcinogens in processed foods.

In the past, EPA has defined negligible risk as one additional cancer per million people over a lifetime of exposure. This criterion is being re-examined by EPA, and no decision has been reached.

Depending on these bills' fate in Congress, they could lessen the risk of environmental contamination, ensure food safety, protect consumers' health, and cut potential health hazards for farmers. However, crop yields could be pushed down, putting upward pressure on food prices.

For seafood inspection, the major issue seems to be not whether there should be a mandatory inspection program, but what government agency will be put in charge and what form the program should take. Some inspection bills now before Congress name USDA to take the lead, while others propose that the Food and Drug Administration or the National Marine Fisheries Service head up the effort.

Some bills propose to adapt the meat inspection programs to seafood. Others rely on the Hazard Analysis and Critical Control Point System, which emphasizes preventing problems rather than spotting already contaminated products. Another issue is who will pay for the inspections; if producers pay, small and seasonal processors with low profit margins may be jeopardized.

For the U.S. economy, the fourth quarter of 1989 and this January probably mark the low point of the current growth slowdown. Continued moderate improvements in net exports and the effects of earlier interest rate declines are likely to keep the economy expanding through 1990. Unexpected changes in oil or food prices and the unfolding events in Eastern Europe are the major uncertainties surrounding the outlook.

Poland and Hungary, in the struggle to restructure their economies, are receiving aid from the industrial nations through the OECD. The effort, coordinated by the Commission of the EC, will help modernize their agricultural sectors. Poland is receiving food and farm inputs. These goods, in turn, are being sold domestically and the funds will be used to revamp Poland's farm sector.

The U.S. and the EC have allocated Poland commodities worth \$128 million and \$186 million. The EC plans eventually to eliminate quotas on food imports from Eastern Europe.



## Agricultural Economy

# Trade Lib: The Bottom Line

**F**or the past two decades, many countries' domestic agricultural policies have contributed to wide swings in world commodity stocks and trading prices, while also hindering world economic growth. Agricultural trade reform on a global scale would allow producer and consumer decisions to be based on market signals, and thus allocate resources in line with consumers' demands.

The primary support for freer trade relies on the concept of comparative advantage. That is, national and global economies would produce the most output with the fewest resources and would have higher incomes if countries produced and exported those goods they can make relatively cheaply, and imported those goods they can produce only at relatively high costs.

In contrast, some government farm programs distort markets by providing incentives that differ from world prices. Resources (such as land, capital, and management) that could be used to meet consumer needs in other sectors (agricultural or nonagricultural) are often attracted instead to commodity production that receives government support. This distortion lowers both national and global incomes and consumers' well-being.

Among the developed countries, current agricultural policies that lead to trade distortions foster higher consumer prices, greater taxpayer burdens, incentives for overproduction, subsidized surplus-disposal schemes, and import barriers that misallocate resources.

There are other, less visible problems created by some agricultural policies and programs. These include excessive use



of chemical fertilizers and pesticides in certain countries, which in turn raises concerns about groundwater quality and food safety. Moreover, the overproduction that occurs often leads to soil erosion and deforestation.

And agricultural policies can be expensive. In the mid-1980's, the U.S. budget outlays for agricultural support averaged almost \$20 billion annually, topped only by the EC's farm spending. In Japan, agricultural support cost the average non-farm family over \$900 in 1986.

Budget outlays for agricultural support in the developed countries amounted to about \$60 billion in 1986, excluding higher consumer prices. Since then, uneven weather and stronger demand have pushed up prices, so government support has dropped. Nonetheless, the \$60-billion figure shows how large the direct taxpayer burden can become for interventionist policies.

While the producer-subsidy pattern is by far the most common in industrial market economies, some developing countries tax producers to subsidize consumers, lowering direct taxpayer burdens. Farmers in these countries tend to use less inputs and produce less than they could.

## Under Free Trade

Much research has been done on the question of what would happen under

totally free trade. Because no country is now proposing that all agricultural support be eliminated, the magnitudes of changes found in the research are too high as predictions of what is likely to happen. But the direction of change forecast by the studies will hold if the GATT talks succeed in moving toward free trade (see the special article on GATT proposals in this issue).

If all trade-distorting policies of the industrial market economies were phased out over 5 to 7 years, world agricultural prices likely would rise by 10-20 percent. With free trade globally, prices would climb even higher. The wide range in the estimates reflects the fact that government support varies inversely with market prices. So, in years of tighter markets, the immediate effects of liberalization would be smaller.

Most research suggests that the rise in world prices would be greatest for sugar and dairy products. World prices for wheat, rice, coarse grains, beef, and sheep also probably would increase.

By contrast, world prices for oilseeds and oilseed products would change little, because developed countries generally provide few direct subsidies for these commodities.

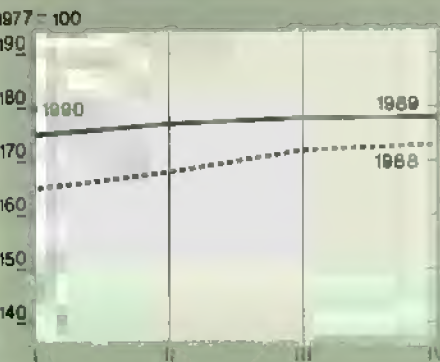
Agricultural trade in most commodities would expand with the removal of trade-distorting policies by industrial market economies. Using market prices and government support in 1986/87 as a base and allowing market participants 5 years to adjust to a free trade environment, USDA researchers found that U.S. agricultural exports could increase by \$3 billion a year. This largely reflects higher wheat and feed grain prices, combined with more livestock and meat exports.

The effect of free trade on price stability is unclear. World market prices for agricultural commodities could become more stable as more producers and consumers were active in world markets. Now, because the agricultural policies of many countries insulate producers from world market conditions, international price responses to weather-related shocks are magnified for many commodities.

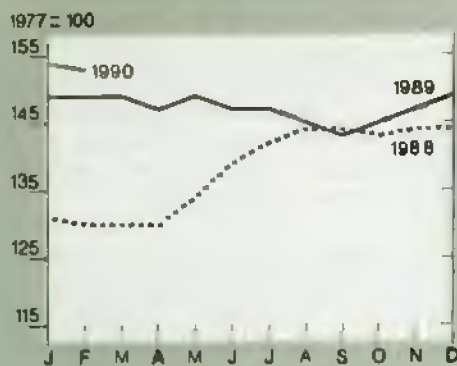


# Prime Indicators of the U.S. Agricultural Economy

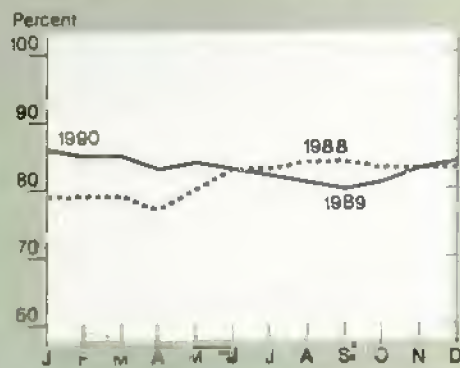
Index of prices paid by farmers



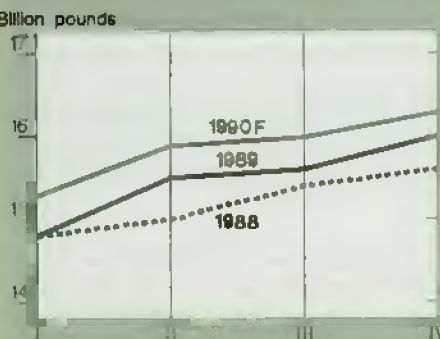
Index of prices received by farmers<sup>1</sup>



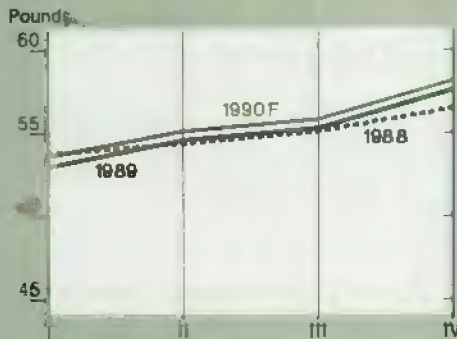
Ratio of prices received to prices paid



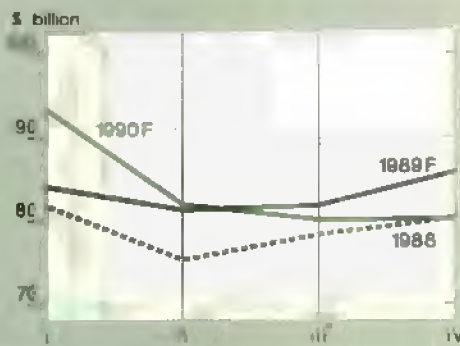
Total red meat & poultry<sup>2</sup> production



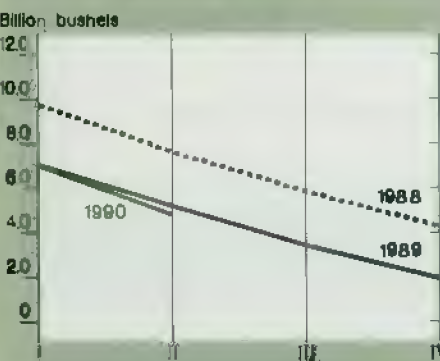
Red meat & poultry consumption, per capita<sup>2,3</sup>



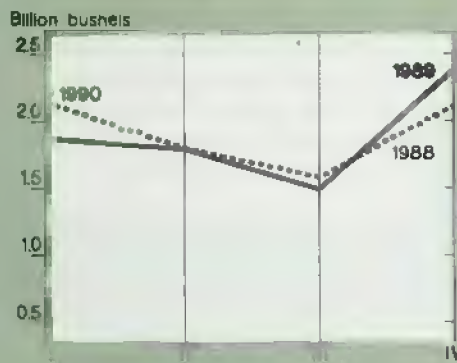
Cash receipts from livestock & products<sup>4</sup>



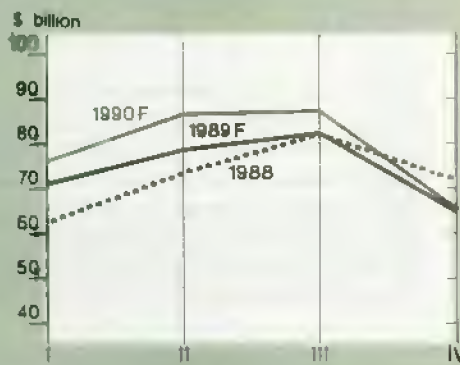
Corn beginning stocks<sup>5</sup>



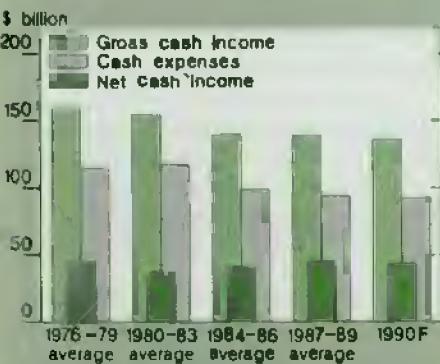
Corn disappearance<sup>5</sup>



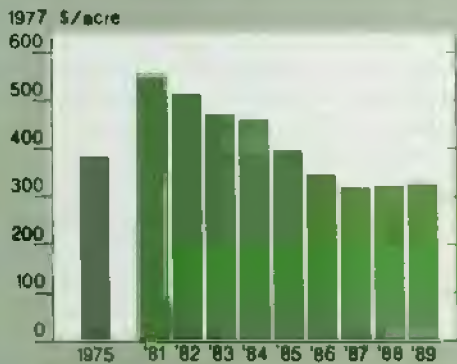
Cash receipts from crops<sup>4</sup>



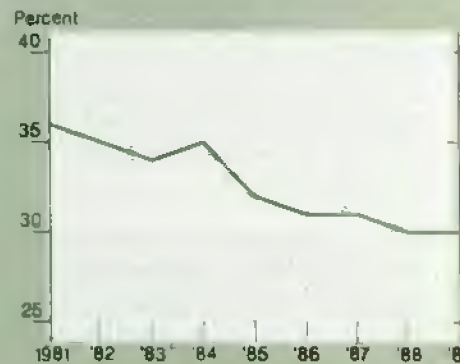
Real cash income<sup>6</sup>



Average real value of farm real estate



Farm value/retail food costs



<sup>1</sup>For all farm products. <sup>2</sup>Calendar quarters. Future quarters are forecasts for livestock, corn, and cash receipts

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<sup>6</sup>Cash expenses plus net cash income equals gross cash income. F=forecast.

## Agricultural Economy

Yet, the elimination of CCC stocks in the U.S. could destabilize some world agricultural prices. Also, the domestic prices faced by consumers and producers in regions where prices are currently stabilized by government programs would fluctuate more than they do now. And these individual effects could cause world prices to be less stable.

### \$35 Billion Gain

According to ERS research, using 1986/87 as a benchmark, multilateral trade liberalization among developed countries would add roughly \$35 billion to their real annual output. This would be about 10 percent of the combined value of their agricultural production.

However, even though world trading prices would be higher, average per unit gross revenue for some farmers in developed countries would decline with the removal of production-based support.

Farmers in developing countries would gain from freer trade in industrial market economies, because international trading prices would climb. But consumers in developing countries would pay more for their food.

What about years when agricultural prices were higher and support less than in 1986/87? Studies both in and outside USDA found the gains to industrial market economies to be in the low \$20-billion range in these years. Consumer losses in developing countries were substantially smaller also.

The EC would be the largest beneficiary from agricultural trade liberalization, with more than \$12 billion in annual benefits, based on 1986/87. Japan would gain roughly \$6 billion and the U.S. \$8-\$9 billion. Most gains to the U.S. would be from government budget savings, while those in the EC and Japan would be from consumer savings due to lower domestic prices.

Over a longer period of time, the benefits from a more efficient allocation of resources would be substantially higher.

Moreover, producers in developed economies need not experience acute or long-term economic losses from trade liberalization. The U.S. proposal offers a safety net; governments could provide nondistorting assistance to farmers as they adjusted to a market-driven agricultural economy at lower costs.

Such assistance could partially or even fully compensate for farmers' income losses from eliminating agricultural price and production-based support, while still reducing total government outlays. [Nathan Childs (202) 786-3313] ■

## Livestock, Dairy & Poultry Overview

*Increasing poultry supplies may hold retail prices below last summer, giving consumers some relief from rising pork prices. Retail beef prices likely will decline from recent record levels. But, they may remain near the high levels of a year earlier during the second and third quarters, even though production is expected to increase. Declining pork supplies probably will push up live hog and retail pork prices in 1990.*

*Milk and egg prices are expected to go down in 1990 as favorable returns stimulate production. Milk output is expanding as producers recover from the forage quality problems of mid-1989.*

### Lower Live Cattle Prices

Feedlots generally remained current during January and February. Larger marketings from greater placements last fall likely will force prices lower in late winter and early spring.

Improved prospects for spring grazing in some areas probably will increase retention of females for herd expansion and lower slaughter of beef cows and heifers. The rate of beef cow slaughter has slowed since its 17-percent increase in

January. Expansion in the early part of the new cattle cycle has been slower than in previous cycles, partially because of lingering drought.

Choice slaughter steer prices will continue to decline as market-ready supplies increase into early summer. In some markets, prices may fall below \$70 per cwt, perhaps not reaching the mid-\$70's again until fall. Composite cutout values for wholesale beef also declined after hitting record highs in late January. Price drops have been sharpest for middle meat cuts (loin and rib).

Given the drop in wholesale beef prices in February, the retail price of Choice beef likely declined in March, after setting a record of \$2.81 per pound in January. Further decreases during upcoming months, reflecting greater supplies, probably will offer an opportunity for retailers to feature beef.

The carcass-retail price spread was wider than normal in January. Declining wholesale beef prices in February may allow retail prices to stabilize or ease downward. The carcass-retail spread likely will continue to widen as wholesale prices decline faster than retail prices.

### Record Pork Prices

Retail pork prices appear to be headed for record levels this spring and summer. Retail prices have risen sharply since mid-1989, pushed by higher wholesale prices.

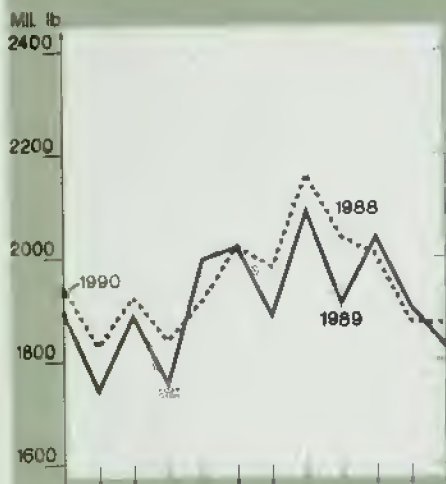
The average retail price of pork reached \$1.95 per pound in January, only 2 cents below the previous record and 8 percent above a year earlier. With prospects for reduced supplies, further price increases seem to be on the horizon.

Although wholesale pork prices held steady throughout the first quarter, they likely will increase during the spring. The drop in last fall's pig crop should cause second-quarter pork production to

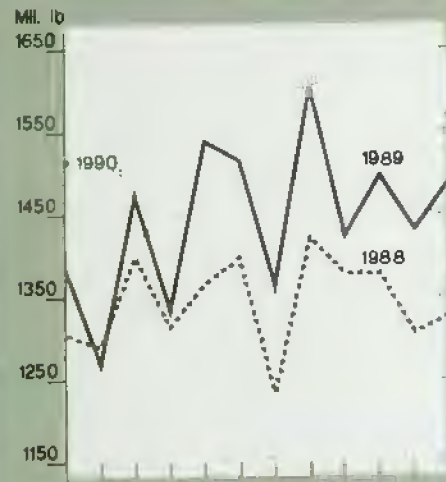


## Production of Livestock and Products

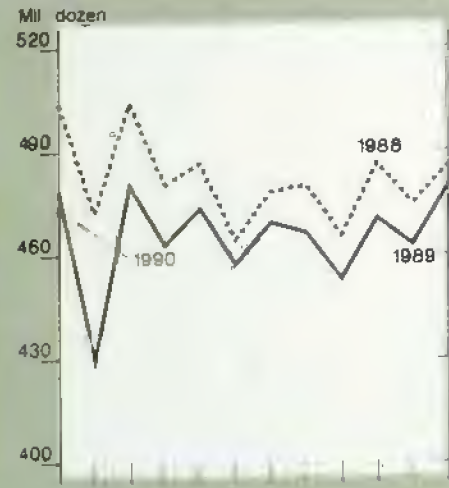
Commercial beef



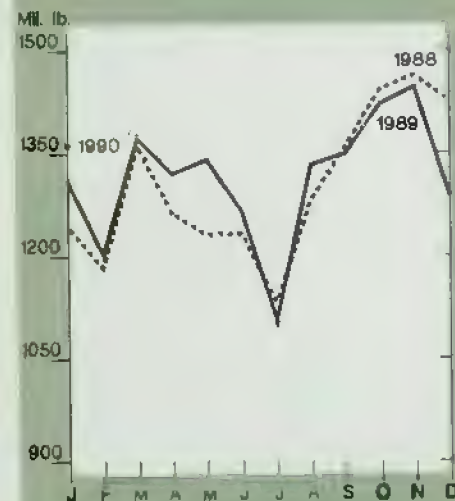
Broilers<sup>1</sup>



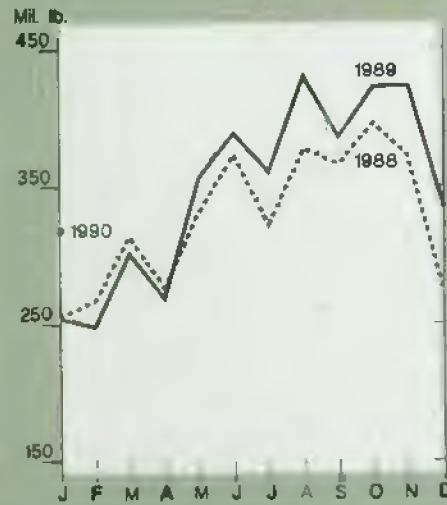
Eggs



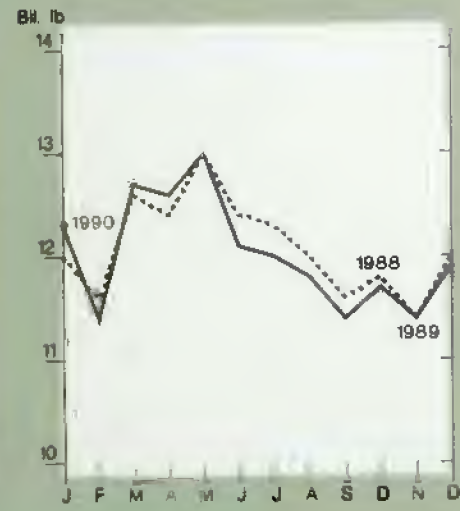
Commercial pork



Turkeys<sup>1</sup>



Milk



<sup>1</sup>Federally inspected production, ready-to-cook.

decline substantially from both the first quarter and a year earlier.

With stronger wholesale prices expected, the uptick in retail prices probably will continue into midsummer. Prices could exceed \$2.00 per pound before they begin to decline in the fall as supplies increase.

### Stronger Broiler Prices

First-quarter wholesale broiler prices strengthened from fourth-quarter 1989 in response to higher prices for beef and pork, additional buying by several fast-

food chains, and a boost in retail chicken features. Wholesale prices rose to 60-61 cents per pound by the second half of February, 25 percent above the first week in January, and surpassed year-earlier levels for the first time since September 1989.

First-quarter wholesale prices probably averaged 56-57 cents per pound. Wholesale broiler prices are expected to average in mid-50 cent range through the third quarter, despite larger output. Seasonal demand factors, such as summer

vacations and barbecuing; reduced pork supplies; and continued high beef prices will all lend support to broiler prices.

An anticipated increase in broiler exports through the second quarter will add support to prices, particularly for legs and leg quarters. The wholesale broiler price in 1990 may average 51-57 cents per pound, compared with 59 for last year.

Broiler production in 1990 is forecast to approach 18.7 billion pounds, up 7 percent from 1989. Increases of 7-8 percent are expected for the first half. Per capita

## Agricultural Economy

consumption of broilers probably will reach almost 71 pounds ready-to-cook in 1990.

### Expanding Turkey Output

Turkey production likely will climb 5-6 percent during 1990, compared with nearly 7 percent in 1989. However, first-quarter production may have increased 18 percent from a year earlier; the second quarter may follow with a 7-8 percent rise.

Poult placements rose an average 19 percent last fall. But December and January placements averaged only 6.6 percent above a year earlier, the smallest increases since April 1989, indicating that growth could slow.

Increasing production has forced turkey prices below a year earlier. First-quarter wholesale hen prices in the Eastern region likely were near 56 cents per pound, below last year's 62.

Retailer purchases in the first quarter appeared stronger than usual because of these low prices. The current second-half price forecast of 60-66 cents per pound assumes that many of these purchases are for late 1990 use, and stocks did increase 13 percent during January. However, if they are for current consumption, second-half prices could be pushed higher than forecast.

Retail featuring of whole turkeys and turkey cuts slowed wholesale price declines in January, despite the large supplies. Relatively high red meat retail prices made more turkey features possible. Exports of lower-priced turkey parts also aided in stabilizing domestic turkey prices.

### More Eggs This Year

Total egg production in 1990 probably will increase about 2 percent from last year. Flock size is expected to rise because egg-type chicks hatched have surpassed year-earlier figures since April 1989. Most of the increase in production

is anticipated in the second half of the year.

Total egg production in the first quarter likely was unchanged from a year earlier. The table-egg flock in early February was about 2 percent smaller than last year. However, the total flock, at 272 million hens, was fractionally larger, as the hatching-egg flock increased 5 percent over 1989.

Wholesale prices are expected to continue to be relatively strong through 1990, but below 1989. Prices began rising in late February, perhaps reflecting early buying for Easter and lower supplies. First-quarter wholesale prices likely averaged about 88 cents per dozen, compared with 78 cents last year. Prices may average 70-76 cents for all of 1990, compared with 82 cents for 1989.

### 1-3 Percent Higher Milk Production

Milk production during 1990 is expected to rise 1-3 percent from 1989's 144.3 billion pounds. The high milk prices of late 1989 and early 1990 have provided a financial boost to dairy farmers and a stimulus to production.

In addition, lower production costs and more milk per cow will give impetus to 1990 milk output. Milk per cow has been recovering from damage caused by poor forage quality in mid-1989. However, producers' and lenders' caution about new investment may limit production growth.

Rapidly falling farm milk prices during first-half 1990 will tighten milk-feed price relationships from late 1989 records. Declining returns may arrest producers' responses to last autumn's high prices. The January 1 lowering of the support price by 50 cents (to \$10.10 per cwt) may contribute to the ultimate price decline.

Recently published revisions of 1988 and 1989 production statistics show that milk output in 1989 declined more than believed earlier. Dairy farmers produced almost 1 billion pounds less milk in 1989 than in 1988, primarily because of fairly

steady declines in milk cow numbers and the lack of normal growth in production per cow.

**For further information, contact:** Mark Weimar, coordinator; Fred White, cattle; Kevin Bost, hogs; Lee Christensen and Larry Witucki, broilers, turkeys, and eggs; and Sara Short and Jim Miller, dairy. All are at (202) 786-1285. ■

## Field Crops Overview

*Improved weather during February has brightened prospects for the 1990/91 U.S. winter wheat crop. Early indicators in Western Europe, Canada, and Australia point to possible wheat production gains there as well. So, wheat prices are falling. USDA will issue its first crop forecasts in May.*

*The 1989/90 U.S. soybean crop, forecast to reach 1.9 billion bushels, represents a substantial recovery from last year's output, but remains below peak levels achieved in the early 1980's. For cotton, both world and foreign ending stocks are the lowest relative to use since World War II.*

### Early Spring for Winter Wheat

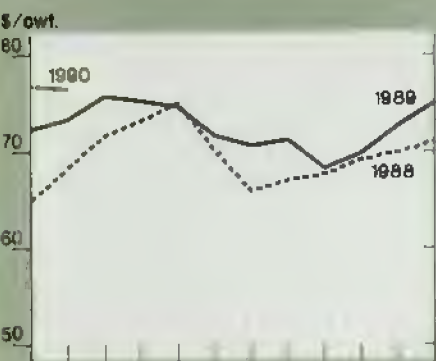
Following mild winter temperatures, winter wheat from Texas through Oklahoma and into Kansas broke dormancy before the end of January, about 4-6 weeks earlier than normal. Much of the nation's hard red winter wheat crop is grown in these three states.

But cold temperatures at the end of February may have caused some plants to become dormant or at least semi-dormant again, remaining more susceptible to winterkill than they would otherwise be. Although temperatures during the last half of February fell below freezing in all three states, daytime temperatures

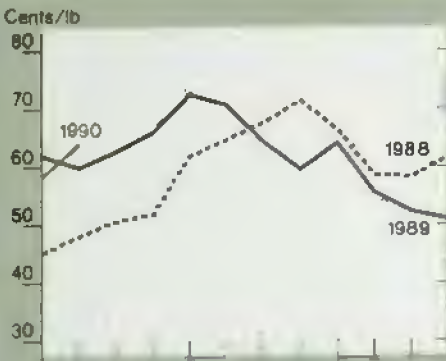


# Commodity Market Prices

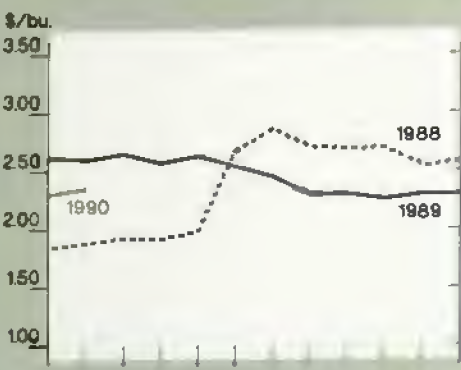
Choice steers, Omaha



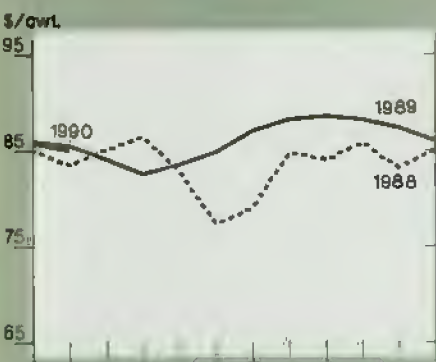
Broilers, 12-city average



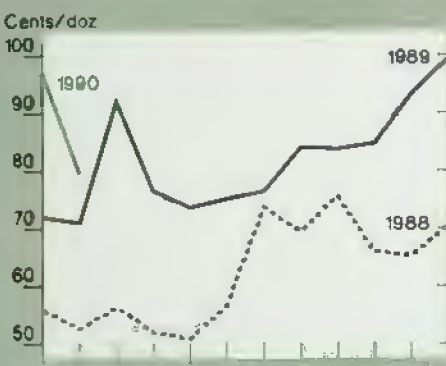
Corn, Chicago<sup>3</sup>



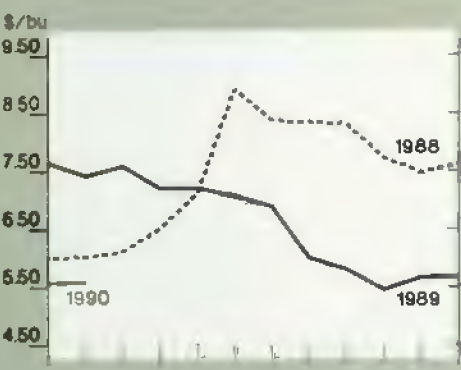
Feeder cattle, Kansas City<sup>1</sup>



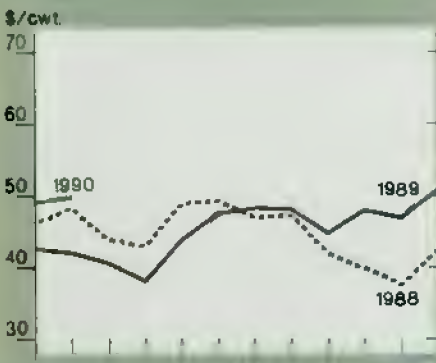
Eggs, New York<sup>2</sup>



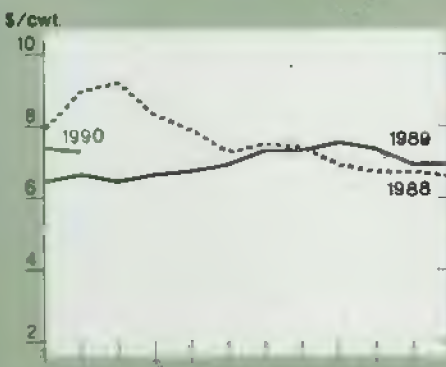
Soybeans, Chicago<sup>4</sup>



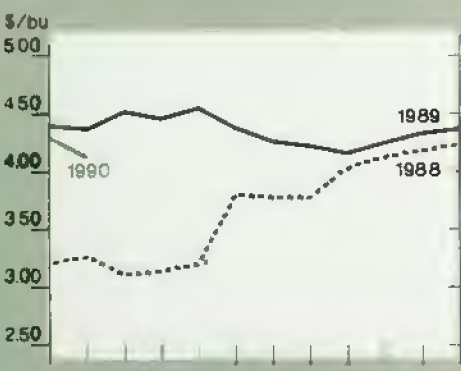
Barrows and gilts, 7 markets



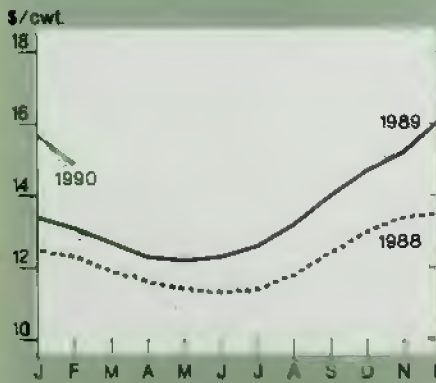
Rice (rough), SW Louisiana



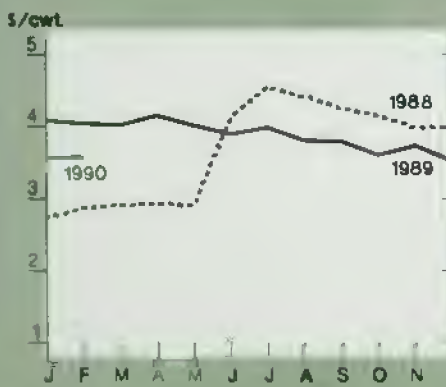
Wheat, Kansas City<sup>5</sup>



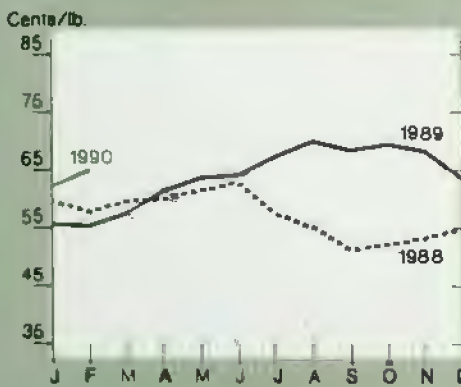
All milk



Sorghum, Kansas City



Cotton, average spot market



<sup>1</sup>600-700 lbs., medium no. 2. <sup>2</sup>Grade A large. <sup>3</sup>No. 2 yellow. <sup>4</sup>No. 1 yellow. <sup>5</sup>No. 1 HRW.

## Agricultural Economy

### Forecast Corn Trade Up Sharply

	1987/88	1988/89	1989/90
<i>Million metric tons</i>			
<b>WORLD*</b>			
Wheat			
Production	502	501	535
Use	531	531	539
Exports	105	98	98
Ending stocks	147	118	115
Corn			
Production	448	399	459
Use	463	458	474
Exports	57	65	71
Ending stocks	146	87	71
Soybeans			
Production	104	95	107
Use	103	98	104
Exports	30	23	26
Ending stocks	20	18	20
<b>UNITED STATES</b>			
Wheat			
Production	57	49	55
Use	30	27	28
Exports	43	39	35
Ending stocks	34	19	12
Corn			
Production	181	125	191
Use	153	133	145
Exports	44	52	58
Ending stocks	108	49	38
Soybeans			
Production	53	42	52
Use	35	31	32
Exports	22	14	16
Ending stocks	8	5	9

\*Exports of wheat and corn do not include intra-EC trade shipments. Data are for marketing years.

were generally above the freezing mark and ranged from normal to 4 degrees above normal, easing producers' concerns somewhat.

The 1989 U.S. wheat crop was a little over 2 billion bushels, up from 1.8 billion in 1988. However, the estimated yield of 32.8 bushels per acre was the lowest since 1978.

Winter wheat plantings for the 1990/91 crop year in France, the UK, and Denmark are estimated to have risen. In addition, the mix has shifted toward higher yielding varieties of feed-quality wheat. Favorable weather in several countries

has contributed to a potential bumper crop.

Wheat crops in Canada and Australia, the other major U.S. competitors, have not yet been planted for 1990/91. Both governments already forecast increases because wheat prices remain attractive relative to competing crops.

Favorable weather in northern Europe also implies good prospects for 1990/91 wheat in Eastern Europe and the Soviet Union, although both are expected to continue to import wheat.

Because of the generally favorable prospects for 1990/91 crops, wheat prices have been falling, despite the low world ending stocks expected this year. Australia and Argentina recently harvested large 1989/90 crops and the EC, especially France, still has substantial supplies of the 1989 crop to be marketed.

The 1989/90 Asian rice harvest is excellent; record or near-record production is forecast for China, Bangladesh, Vietnam, Thailand, and India. Strong production in China is reducing calendar 1990 imports. Prices for better-quality rice remain high as farmers in Thailand hold newly harvested rice off the market until later in the year. Low U.S. stocks are also keeping U.S. prices high and slowing exports. But, Vietnam has reportedly already sold over 1 million tons in international markets.

### Start of Corn Planting

In the U.S., early-season planting has already begun in the far South and the East. Rainfall in these outlying areas is hampering field work, and early-season sowings are modestly behind schedule. For most of the Corn Belt states, however, planting will not begin until May and early June.

The 1989/90 U.S. corn crop is estimated to be 2.6 billion bushels above a year earlier. The increase came from gains in both area and yield. An estimated additional 6.5 million acres were harvested, and yields likely were over 116 bushels per acre.

Food, seed, and industrial uses, as well as feed and residual uses, are forecast to increase during the crop year. In total, domestic use is expected to rise by almost 500,000 bushels, exceeding 5.7 billion. Even though total use is rebounding, it remains well below other years.

The expansion in domestic use, coupled with a 12-percent increase in exports and relatively small beginning stocks, means a decline in ending stocks for the year. At 1.5 billion bushels, forecast 1989/90 corn ending stocks are the smallest since 1983/84. Stocks for the year are expected to be only 30 percent of the 1986/87 peak.



### ***Fiscal 1990 Export Forecast Raised Slightly***

U.S. agricultural exports in fiscal 1990 are forecast to reach \$38.5 billion, \$500 million higher than the estimate made last November, but down from nearly \$40 billion in fiscal 1989. Export volume in fiscal 1990 is expected to be 148.5 million tons, 3 million above the November estimate and nearly 2 million above fiscal 1989.

The upward revision largely reflects a 3-million-ton increase in expected U.S. corn exports. Prospects for foreign coarse grain imports have recently improved, and U.S. corn is anticipated to capture a larger share than earlier expected.

The forecast for U.S. agricultural imports also was raised \$500 million from the November estimate, and now matches fiscal 1989's record \$21.5 billion. December's severe freeze in Florida and Texas has increased fruit, juice, and vegetable imports. The forecast for the U.S. agricultural trade surplus remains unchanged from the November estimate, \$17 billion.

However, 1990's export value is still expected to be down from a year earlier. Lower prices for grains and oilseeds will offset increased export volume, and export value is likely to drop for the first time since fiscal 1986.

U.S. wheat exports are expected to fall \$1 billion; export volume is projected to be 4.7 million tons smaller than in 1989, and export prices are expected to average lower as well. An unexpectedly large Southern Hemisphere crop and prospects for a big Northern Hemisphere harvest have pressured prices down in recent months.

Similarly, abundant world supplies of oilseeds have lowered soybean prices; U.S. oilseed and product exports are expected to fall \$1 billion in fiscal 1990.

However, respective gains in exports of cotton, animal products, and horticultural products could reach \$500, \$300, and \$100 million above fiscal 1989. [Stephen MacDonald (202) 786-1822]

Foreign coarse grain production in 1989/90 is down slightly from 1988/89. With the Southern Hemisphere crop now being marketed, Argentina and South Africa are expected to increase exports even though the South African crop is down from a year earlier. Argentine production partly recovered from the previous season's drought, raising exportable supplies. South Africa is still exporting its large 1988/89 crop.

### ***Eastern Bloc Imports***

This year, Eastern Europe and the Soviet Union also registered production gains. Despite this, both are boosting coarse grain imports because of even larger growth in feed demand. Eastern

Europe's imports are forecast to rise to 6.2 million tons, the highest since 1980/81, while exports are expected to drop to a 30-year low of only 700,000 tons. In the USSR, imports are projected to be slightly above last year and the biggest since the 1984/85 record.

But Eastern Europe and the Soviets are apparently having trouble paying for their large grain imports. The Soviet Union reportedly is seeking repayment extensions on its grain import credits.

Because of generally large debt burdens and foreign exchange shortages, some of Eastern Europe's imports are likely to take the form of aid. The EC, the U.S.,

and Japan recently agreed to put together aid packages for Poland (see the World Agriculture and Trade department). The U.S. also recently announced an aid package for Romania.

Almost all the Eastern European countries have significant outstanding unused balances for both coarse grain and wheat imports from the U.S. under the Export Enhancement Program, although some of the commitments are 3 or 4 years old. USDA has given all countries until the end of this fiscal year to use old balances, after which they would need to be renegotiated.

### ***Bumper Soybean Crop***

The 1989/90 U.S. soybean harvest, up 378 million bushels from 1988/89, is one of the larger domestic crops on record. But, while U.S. production remains substantial for the year, it is still below the peaks of the early 1980's. Record crops abroad and slower demand growth have resulted in sluggish U.S. exports and a significant buildup in stocks.

The stock buildup and production increase have moderated prices. Season average prices for 1989/90 are forecast between \$5.45 and \$5.65 per bushel, down from last year's \$7.42 and also down from \$5.88 in 1987/88.

On March 2, USDA announced the results of the 0/25 signup program for soybeans, with producers indicating that they may plant 1.92 million acres in the program. The purpose of the program is to promote planting flexibility and to encourage soybean plantings. After considering the price impact of expanding the soybean planted area, the Secretary of Agriculture accepted all of the area. The bulk of the signup acreage is in Nebraska, Iowa, and Illinois.

The 0/25 program allows participating farmers to shift up to 25 percent of their permitted acres to soybeans without losing any base. However, they will not collect deficiency payments on the acreage planted to soybeans. Under a somewhat similar program a year ago, indicated

## Agricultural Economy

plantings totaled about 3.5 million acres, but only 80 percent was accepted.

This year, only a small portion of the acres indicated are expected to shift from feed grains (mostly corn) into soybeans. Since the results of the signup are not binding on the producer, many farmers use this program as a hedge against shifts in returns to program crops relative to soybeans.

Foreign soybean production is projected up in 1989/90. South American production likely will set a record, providing intense export competition for the U.S. this spring. The introduction of Brazil's new free-floating currency, the cruzeiro (formerly the cruzado), could enhance Brazil's export competitiveness by sharply lowering the exchange rate.

In the EC, the major importer, demand for soybeans and products is recovering from 1988/89's decline. Because of improved margins, much of the EC's increased demand will be met by importing more soybeans for crushing.

### Dwindling Cotton Stocks

Recent increases have brought expected 1989/90 cotton output in India to a record 9.4 million bales and in Argentina to a record 1.3 million. Coupled with continued excellent prospects for other Southern Hemisphere cotton crops, these increases boosted estimates of foreign production slightly.

But, foreign output is still projected nearly 2 percent below last season and 9.6 million bales below expected consumption. So, stocks will fall again.

Estimates of both U.S. consumption and exports remain up substantially this year, with production down and total use up,

U.S. stocks are also tightening notably. *[Jim Cole (202) 786-1840 and Carol Whitton (202) 786-1826]*

**For further information, contact:** Sara Schwartz, world food grains; Edward Allen, domestic wheat; Janet Livezey, domestic rice; Pete Riley, world feed grains; Larry Van Meir and Allen Baker, domestic feed grains; Roger Hoskin, domestic oilseeds; Carolyn Whitton, world cotton; Bob Skinner and Scott Sanford, domestic cotton; Jim Schaub, domestic peanuts. World information (202) 786-1824, domestic (202) 786-1840. ■

## Specialty Crops Overview

*Despite bigger production in 1989, January stocks of apples and pears in cold storage were down 3 and 15 percent from a year earlier, largely because of strong export demand. January and February strawberry marketings were higher than a year earlier even with disruptions caused by the December freeze in Florida. Larger-than-usual California marketings during the two months made up for Florida's losses.*

*Vigorous demand from processors drew down early February stocks of fresh potatoes to a 7-year low and lifted grower prices. Both food-service and export demand for frozen potatoes are up.*

*Exports of dry beans in 1989 were strong, especially for pinto beans to Mexico, propping up grower prices. Flue-cured and burley tobacco price supports for 1990 have been set, up 2 and 2.6 cents a pound from 1989.*

### Big Apple and Pear Shipments

Shippers appear to be moving apples on an accelerated schedule compared with

last season. Shipments dropped off in the spring of 1989 following national news reports that raised consumer concerns about Alar residues in apples.

U.S. apple production in 1989 was 10 percent above a year earlier. Output increased 28 percent in Washington state, but fell in Pennsylvania, Virginia, West Virginia, and North Carolina. Washington state production is grown primarily for fresh use.

The U.S. grower price for all apples averaged 13 cents a pound in February, compared with 18 cents a year earlier. Extra fancy red delicious sold for \$10 per carton in late February, f.o.b. Washington state, compared with \$14.00 a year earlier.

Strong export and processing demand have kept pear prices firm, despite a larger crop. Grower prices averaged \$389 per ton in February, compared with \$362 a year earlier. February f.o.b. prices for fresh pears in Washington state remained virtually unchanged from a year earlier. The volume of fresh pear shipments through February was running ahead of last year.

U.S. pear production rose 6 percent in 1989. California and Washington accounted for most of the increase, while small declines occurred in Oregon and New York.

Cold weather caused production losses to California's February strawberry crop, but not before the volume of Florida shipments had recovered from the freeze there. Supplies are expected to be abundant during late March and April when Florida and then California enter their high-volume period.

Although strawberry prices jumped higher than normal in January because of the Florida losses, they returned to seasonal levels in February. Flats of 12 one-pint trays sold for \$8 to \$9, f.o.b. Florida shipping points, in late February.



## Smaller Potato Stocks

Vigorous processor demand has drawn stocks of fresh potatoes to a 7-year low, leading to strong grower prices. Robust exports of frozen french fries, combined with peppy demand from food-service firms, have contributed to the growth in potato processing.

Processing use of the 1989 potato crop through early February was up 18 percent from a year earlier. A long-term consumer shift from fresh to processed potatoes continues to push up processing demand. Increased away-from-home eating and the desire for convenience in purchased foods have been big contributors to this growth.

Increased exports of frozen french fries, mostly to Pacific Rim countries, also account for some of the gain in potato processing. Frozen potato exports rose 14 percent in 1989.

The strong demand and smaller remaining supplies have boosted prices throughout the marketing chain. Grower prices for all sales averaged \$6.94 per cwt during the first half of February, up from \$6.43 a year earlier. Consumer prices for fresh potatoes averaged 15 percent higher in January than a year earlier. Processor prices for frozen potatoes were up 4 percent.

Production of 1989-crop fall potatoes was an estimated 325 million cwt, compared with 314 million in 1988. The 1989 crop was larger than in most recent years, but not a record; fall production was 354 million cwt in 1985 and 345 million in 1987.

## More Dry Bean Acreage

The preliminary grower price for all types of dry beans averaged \$32.10 per cwt in February, up from \$30 a month earlier. Planted acreage likely will rise again in 1990.

Rising exports to Mexico, due to crop failures there, have boosted U.S. prices for the 1989 pinto bean crop, despite 32 percent higher U.S. production than in

1988. Navy bean prices are running about 25 percent below last year.

Despite a 26 percent larger 1989 dry bean crop, strong export demand has kept the average U.S. price for all types in the same range as in 1988. The season average price was \$29.80 per cwt for the 19.3-million-cwt crop in 1988. Preliminary estimates indicate the value of the 1989 crop to be \$680 million, up 18 percent.

Because of higher 1989 dry bean prices and lower returns for the major grain crops, the area planted to dry beans likely will remain high or even rise further in 1990. Growers planted nearly 1.9 million acres to dry beans in 1989, up 25 percent from the year before.

## Higher Tobacco Supports

Price supports for flue-cured and burley tobacco for 1990 will be up 2 and 2.6 cents a pound from 1989. The national basic marketing quota for flue-cured tobacco will be 12.8 million pounds lower, while the quota for burley will rise by 14.7 million. The flue-cured tobacco support price will be \$1.488 per pound. Burley will be supported at \$1.558.

Price support levels are set by a formula, based on market prices during the past 5 years (two-thirds weight) and changes in a production cost index (one-third weight). Crop year 1990 loans to producer associations will be subject to a reduction of 1.4 percent under the deficit reduction sequester order mandated by the Gramm-Rudman-Hollings Act.

Prices are supported through CCC loans made to growers' cooperatives using tobacco as collateral. Growers receive guaranteed minimum prices, but if tobacco is sold for less than its cost to the cooperative, the difference is borne by growers and purchasers, not CCC. The no-net-cost tobacco law requires that all losses in operating the tobacco program be covered by assessments paid by growers and purchasers. The 1990 no-net-cost assessment for flue-cured has been set at 2 cents per pound, divided equally between producers and buyers. The burley assessment will be announced soon.

Potential tobacco marketings are regulated by effective quotas, which are each grower's share of the national basic quotas adjusted upward for undermarketings (unused quota from previous years) or downward for overmarketings (tobacco sales in excess of the quota during the previous season).

Effective quotas are expected to increase 35 million pounds in 1990 for flue-cured and 82 million for burley. Growers may market up to 103 percent of their effective quota.

The basic marketing quotas for flue-cured and burley are the sum of: (1) domestic cigarette manufacturers' stated purchase intentions, (2) average exports for the 3 most recent marketing years, and (3) an adjustment to maintain loan stocks at 15 percent of the basic quota, or 100 million pounds of flue-cured and 50 million pounds of burley.

Domestic manufacturers indicated they intend to purchase 10 percent less flue-cured and 2.5 percent less burley in 1990. Declining domestic consumption has caused manufacturers to cut back purchases. Tobacco leaf exports rose only 3 percent in 1989, compared with 12-percent growth in 1988.

Calendar 1990 leaf exports may increase from 1989, but only a little. Declining cigarette consumption in major importing countries is dampening growth in foreign sales. [Glenn Zepp (202) 786-1883]

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## Commodity Spotlight

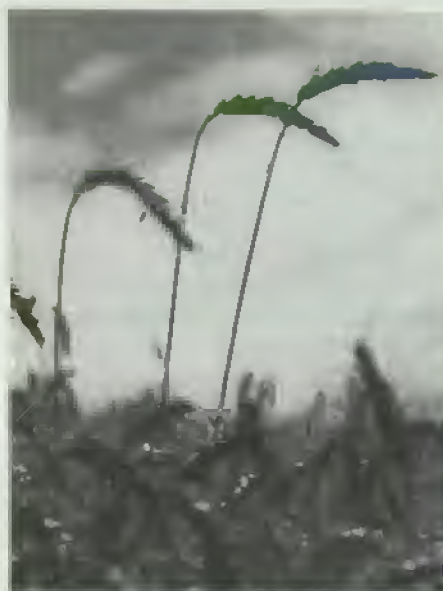
## Saudis Aim To Cut Wheat Exports

In 1980, Saudi Arabia launched a program to become self-sufficient in wheat. It did so by offering domestic producers the astonishing price of \$28 per bushel (\$1,032 per ton). At that time, no. 2 U.S. hard red wheat was trading on world markets for an average of \$4.78 a bushel.

Planners in Riyadh may have underestimated the response that this astronomical procurement price would generate. They were initially pessimistic because of declines in domestic production during the 1970's and sharp hikes in food prices following the economic boom related to the 1973 and 1979 petroleum price spikes.

Saudi farmers' response was startling: Production doubled in 1982 and nearly doubled again in 1983. By 1984, the country was self-sufficient in wheat, after depending on imports for an average of 85 percent of its needs during 1979-81. Surprised at the rapid gains, Saudi officials reduced the price by half in 1984. But \$530 per ton was still a very rewarding figure, and production continued to climb.

Efforts to encourage farmers to shift to less profitable barley fizzled in 1989, and Saudi farmers harvested a record wheat crop of 3.1 million tons. According to the International Wheat Council, Saudi wheat exports reached 2.4 million tons in 1987/88, more than double the 1986/87 level. However, USDA is forecasting a drop in 1989/90.



Other incentives besides the high procurement price boosted output. Efforts to encourage agricultural development allowed investors to receive a free deed to government land, provided a farmer cultivated it for 3 years. Rural development was a major objective of these earlier plans. Wheat farming has added over \$1 billion annually to rural income.

Despite the procurement price cuts, domestic wheat price and input subsidies are still high enough to allow Saudi farmers and investors to afford the best imported U.S. seed (over 115,000 tons for \$50 million in 1989), plus the best farm tractors, combines, and irrigation systems.

Now, however, budget and water resource constraints are increasing pressure on the Saudi Arabian Ministry of Agriculture and Water to change policies. In 1988, the procurement price paid to the six largest producers was cut to \$400, but for others it remained at \$530. In contrast, barley has a procurement price of only \$267 per ton, and lower yields to boot.

### Slow Demand Growth

Domestic demand for wheat has been fluctuating since 1982, when the population of foreign workers in Saudi Arabia peaked at 4 million. A growing foreign

population helped pull up the demand for wheat in the 1970's. Earlier gains in wheat consumption—from 654,000 tons in 1976 to 1.4 million in 1984—figured into the overkill for promoting Saudi wheat production; planners expected more demand growth than actually materialized in the second half of the eighties.

Total domestic wheat disappearance is forecast to be 1.3 million tons in 1989/90 (including seed, feed, and waste). This amount includes food use of about 1.1 million tons. The remainder includes seed use of about 150,000 tons and some wheat milling byproducts, which provides animal feed.

The Saudis' domestic wheat demand is expected to rise slightly in the 1990's. But, the 20-percent import duty on bakery products has caused local bakeries to proliferate.

A government enterprise, the Grain Silos and Milling Organization, accounts for virtually all commercial wheat purchases, flour milling, and most of the flour distribution. Bread retails for 26-30 cents per pound, less than half the U.S. average. Most of the gain in domestic consumption in the early 1990's likely will come from greater use in bakery products and food processing.

### Water Problems

Wheat cultivation has flourished in north central Saudi Arabia. A new green stretch of 2 million acres now covers part of the landscape from Riyadh northward, nearly reaching the Jordanian border in the winter. Rainfall in the winter sometimes supplements modern irrigation systems, and the cool weather is good for wheat.

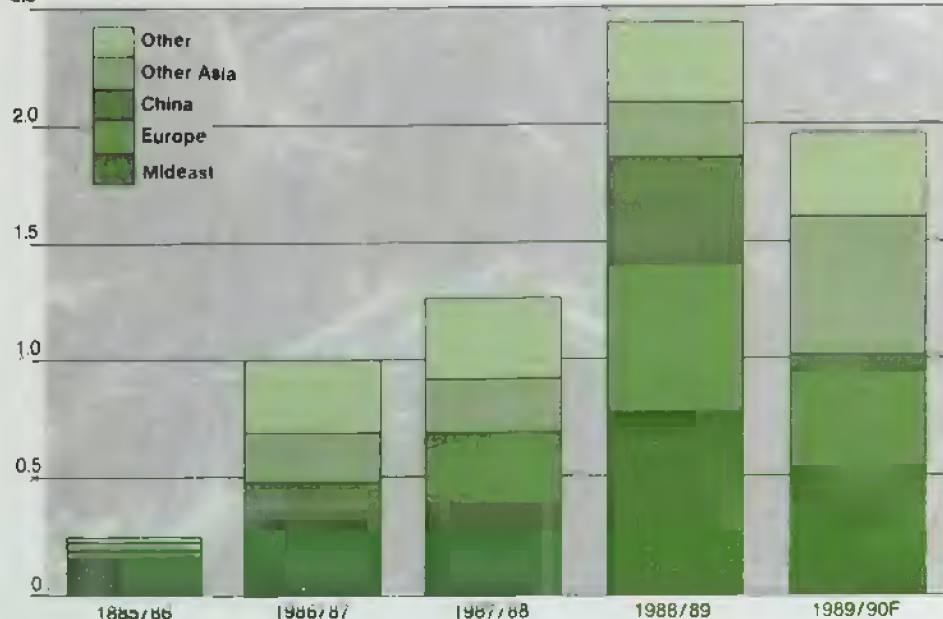
For centuries, small farmers grew wheat with irrigation near the oasis of Qassim, but production ranged from 39,000 to



## Commodity Spotlight

## Mideast Gets Biggest Share of Growing Saudi Wheat Exports

Million metric tons  
2.5

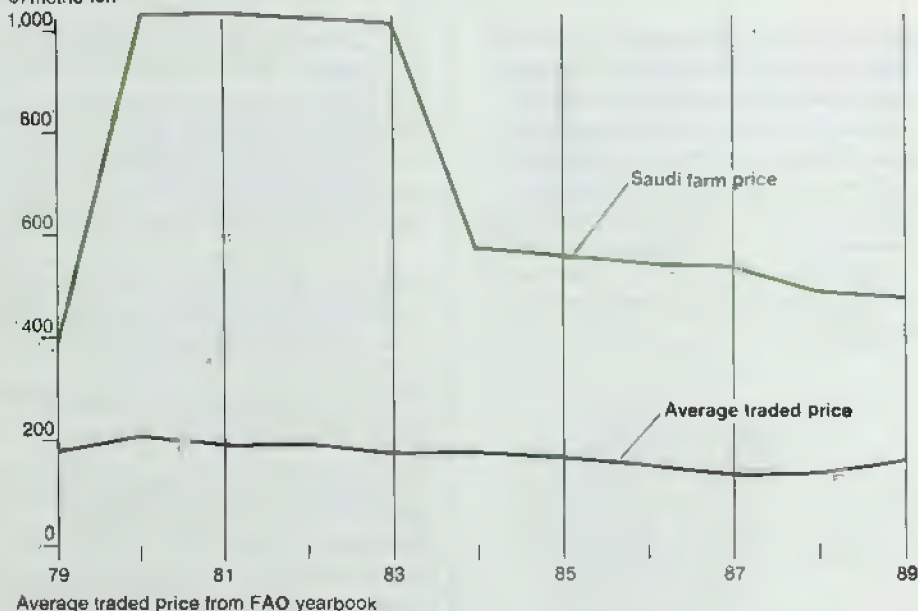


Market year July 1 to June 30.

Sources: International Wheat Council and USDA.

## Saudi Farm Price for Wheat Is Still \$300 a Ton Higher Than Average Traded Price

\$/metric ton



205,000 tons in the 1970's, far below the current level.

Alarm at the depletion of underground water reserves, especially near Riyadh, has not yet stopped the wheat production boom. Some farms still have land area to develop, although new licenses were prohibited 18 months ago.

Nonetheless, the pace of growth in wheat output has slowed because of the diminished underground water supply between Riyadh and Burayda, the most prosperous wheat area. Some Saudi farmers are now using massive 750-horsepower pumps to pull up water for their wheat.

Concerns about water supplies in part explain the government's move to cut the procurement price and eliminate other subsidies. But removing the seed subsidy and cutting the price still left a hefty profit margin. Many Saudi farmers earn a profit of \$600 per acre, compared with \$60-\$80 earned by U.S. farmers.

The Saudi farmers' profits would be even greater if large investors did their own work. Instead, they contract out most of the work to special firms, who use an army of technicians skilled in the world's most modern mechanized methods for wheat farming.

### Benefits for Gulf Countries

As a key member of the Gulf Cooperation Council (GCC), the Saudis ship about 200,000 tons of wheat to GCC members: Kuwait, UAE, Bahrain, Qatar, and Oman. The Saudi government loses about \$300 per ton exported.

Saudi wheat exports also go to other Mideast countries. Jordan has been a market for over 200,000 tons of Saudi wheat in

## Commodity Spotlight

### Saudi Arabia's Wheat Subsidy Payments Remain High, Although Per-Bushel Support Is Dropping

Item	Unit	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90
Area	1,000 ha.	60	137	264	470	500	600	630	655	665
Yield	Tons/ha.	3.12	3.01	2.69	2.98	4.09	3.81	3.81	4.27	4.50
Production	1,000 m. tons	187	412	710	1,402	2,047	2,285	2,400	2,800	3,050
Farm price	\$/ton	1,035	1,021	1,013	567	552	540	533	480	470
Average trading price <sup>1/</sup>	\$/ton	193	198	173	176	165	151	130	122	161
Government subsidy payments (U.S. \$)										
Output	\$/ton	842	823	840	391	387	389	403	358	309
Fertilizer	\$/ha.	20	21	21	20	20	19	19	17	15
Credit	\$/ha.	18	19	21	22	22	23	23	19	17
Electricity	\$/ha.	15	16	16	17	19	16	15	15	14
Irrigation	\$/ha.	102	104	101	89	76	75	73	67	54
Machinery	\$/ha.	53.1	52.65	53.55	59.4	33	32	32	31	23
Technology, labor	\$/ha.	83.5	77.5	78	78.5	79.5	82	75.5	70	40
Seed	\$/ha.	55	52	53	51	54	62	23	5	0
Other	\$/ha.	67	60	50.5	55.5	40.5	40	38.5	45.5	30
Total		1,257.5	1,225.15	1,234.05	783.4	731	738	702	627.5	502
Estimated total gov. expense	\$ mil.	.250	.510	1,008	1,098	1,496	1,877	1,858	1,757	1,606
Producer subsidy equivalent <sup>2/</sup>		81.35	80.61	82.92	68.96	70.11	72.04	75.61	74.58	65.74

1/ UN FAO Yearbook. 2/ A PSE is the ratio of total government transfers to farm revenue (including direct payments).

Sources: Ministry of Agriculture and Water, Riyadh; ATO Office, Jeddah; Ariebe Co.; and ERS estimates.

each of the last 3 years. In calendar 1989, Saudi Arabia exported 200,000 tons to Turkey. Although previously Turkey was the leading Mideast wheat exporter, it was hit by a drought. Now, the Saudis are the Mideast leader, and a major supplier of wheat to some countries in Africa as well.

Saudi exports of wheat to Indonesia increased from 252,000 tons in 1988 to 320,000 last year. Exports to China and the Soviet Union increased sharply in 1989. Portugal has been the top European buyer, taking 172,644 tons in 1987 and 254,000 in 1989. The USSR, China, Norway, the UK, and Colombia are non-OPEC petroleum exporters who also buy Saudi wheat.

In 1989, wheat accounted for about \$310 million of Saudi Arabia's \$400 million in agricultural exports. While the nation imported \$4.7 billion worth of agricultural commodities that year, it was able to reduce its agricultural trade deficit by increasing exports. Yet more compelling reasons have led to plans for a reduction in wheat output and exports. Policymakers plan to diversify cropland developed for wheat.

Despite the program's cost of over \$1 billion annually, the main objectives of the high wheat price have been achieved. Subsidies for wheat and other agricultural products reduced Saudi net food import dependency from about 87 percent in 1980 to about 50 percent by 1989.

During the 1973/74 oil embargo, there was some talk in international trade-policy circles of linking the price of oil to the price of wheat. Now, this is very unlikely to happen because Saudi Arabia is no longer a wheat importer.

The outlook for Saudi Arabia's wheat appears to include exports of over 1.5 million tons annually in the early 1990's. If support prices for some other crops are raised sharply, though, wheat production might decline below 3 million tons annually, causing a drop in exports. [John Parker (202) 786-1683]



# Milk: Time for Component Pricing?

Traditionally, variations in producer prices for milk have been based solely on milkfat content. Consequently, when the solids-not-fat (SNF) content in milk exceeded the average, manufacturers (particularly of cheese) have sometimes paid less than they would have under a different system. The higher the SNF content, the higher the yield of some dairy products. By the same token, these manufacturers sometimes have overpaid for milk with below-average SNF.

As the SNF components of milk have become more valuable compared with milkfat, interest has increased in milk pricing methods that reflect both SNF and milkfat content.

Multiple component pricing (MCP) plans have been tried with success. MCP has the potential to pay producers more equitably for their milk and to reflect more accurately the supply and demand for the various milk components.

More plants, especially cheese manufacturers, have been paying producers on a protein or SNF basis, as well as on a milkfat basis. To illustrate the reason, consider 100 pounds of 3.5-percent milkfat milk. With 3.1-percent protein, it yields 9.61 pounds of cheddar cheese. But it would yield 10.02 pounds of cheese if it had 3.4-percent protein.

For the most part, premiums are paid only for milk containing protein or SNF above a specific level, without any deductions for lower levels. Some plants also pay premiums for quality.

## Lower Milkfat Value

For many decades, the demand for milkfat carried most of the market value of milk. However, decreasing demand for milkfat and increasing demand for SNF

or protein have combined to shift the relative values of milk's components.

The residual value of SNF (the difference between the average price for 100 pounds of milk and the value of the milkfat) rose from 36 percent of the average milk price in 1950 to 58 percent in 1989.

However, it was not enough for the value of SNF to rise to make an MCP feasible. The component has to vary enough and be measurable. Contemporary electronic milk testers can economically and accurately measure protein or SNF, making it possible to price producer milk accordingly.

The exact proportion of fat and other components in raw milk depends on numerous factors, including the breed of cow, stage of lactation, season, and the cow's diet. On average, solids-not-fat (i.e., lactose, protein, and minerals) vary directly by about four-tenths of a pound for each 1-pound variation in milkfat.

Most of this SNF variation is in the level of casein, the primary protein. However, there is considerable deviation from this average among individual cows.

The changes in the level of SNF in milk are principally driven by changes in the level of protein. Therefore, testing for either protein or SNF allows one to estimate the other component. Payments to

producers are based on a specific test for either SNF or protein.

## MCP in California and Great Basin of Utah

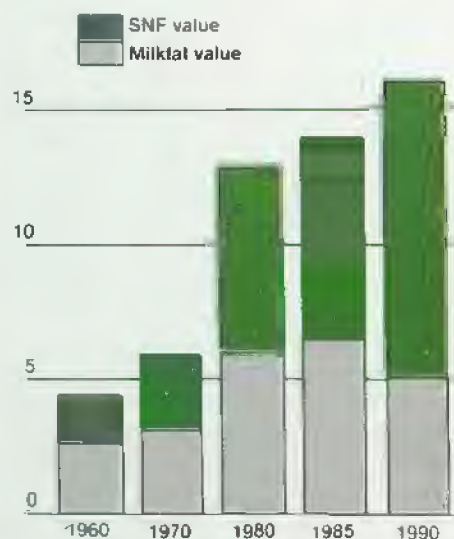
In California, handlers have been paying for Class I (beverage) milk on a multiple component basis since 1962. Component pricing for the other milk classes was not adopted until 1969.

California handlers pay for Class I milk on the basis of milkfat, SNF, and fluid carrier. For other classes, they pay on the basis of milkfat and SNF. Prices for milkfat and nonfat solids vary by class. Producers are paid on the basis of milkfat and nonfat solids.

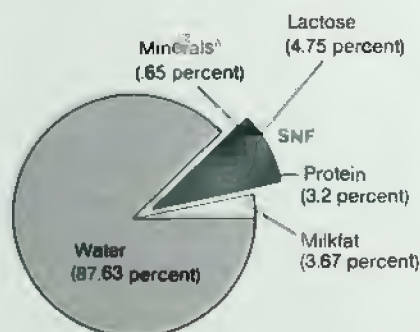
Although some taste tests indicate that consumers may prefer fluid products with a higher SNF content, they generally have not been willing to pay more for milk with added solids. In addition, handlers cannot readily adjust the SNF level of milk downward, or move it to other dairy products. Thus, to the extent SNF exceeds the minimum legal standard, fluid milk processors would not be able to recover their costs in the marketplace.

Solids-Not-Fat Value in Milk Rising;  
Milkfat Value Falling

\$/cwt of milk  
20



Solids-Not-Fat Average  
9 Percent of Raw Milk



## Commodity Spotlight

So, California raised the minimum SNF standard for fluid whole milk to 8.7 percent, close to what average producer milk contains. That's compared to the 8.25-percent federal minimum standard, well below the average. The higher SNF standard relieves the pricing inequities to fluid processors under an MCP system.

In 1988, MCP was introduced in the Great Basin market, centered in Utah. It was the first time MCP had been used in a federal milk marketing order. MCP was adopted primarily to allow regulated handlers (plants under federal order regulations) to compete with unregulated handlers that were using MCP plans.

Unregulated handlers had been paying more for milk with a high protein content and less for milk with a low protein content. Regulated handlers also could pay more for milk with a high protein content, but were prevented by federal order regulations from paying less than a specified minimum price. Consequently, regulated handlers were more likely to end up with low protein milk.

In addition, MCP was adopted in the Great Basin order to improve equity among producers—by allowing the price to reflect more closely the market value of their milk.

The MCP plan used in the Great Basin order charges milk buyers per pound of milkfat and protein for milk used in Class II products (fluid cream, ice cream, cottage cheese, and yogurt) and Class III (butter, cheese, and nonfat dry milk).

The pricing of milk used in Class I products remains on a milkfat and volume basis, not MCP, because handlers receive no discernable economic benefits from differences in the protein content of fluid milk products.

Reportedly, the switch to MCP in the Great Basin area did not dramatically redistribute cash receipts among producers on a marketwide basis. However, a few producers saw their incomes change sharply. [Sara D. Short and Carolyn Liebrand (202) 786-1769] ■

## World Agriculture and Trade

### EC Spearheads Aid to E. Europe

**R**ecent events in Eastern Europe have captured the world's attention. The transition from communism toward democracy has been largely peaceful, but the difficulties ahead are immense. The reforming countries need assistance from the West if their programs are to succeed.

The industrial nations, through the Organization for Economic Cooperation and Development (OECD), agreed last July to aid Poland and Hungary in restructuring their economies. The aid program, coordinated by the Commission of the EC, concentrates on the following five areas:

**Access to markets.**—The OECD countries have agreed to buy Polish and Hungarian goods to integrate these countries into the global market.

**Investment.**—The OECD has already pledged credits to promote investment in Hungary and Poland, and has established a \$1-billion fund to stabilize Poland's currency, the zloty. The creation of a European Bank for Reconstruction and Development, similar to the World Bank, is being explored. Many private companies have already launched joint ventures in Hungary. General Electric, for example, has purchased part of a Hungarian lightbulb manufacturer.

**Vocational training.**—The move away from command economies will require financial and banking skills. The OECD will provide some of the needed training.

**The environment.**—Eastern European countries are only now recognizing the importance of safeguarding the environment. Projects to repair damage that has already been done as well as new technology designed to prevent more damage are part of the OECD effort.



**Agriculture.**—The OECD intends to help Poland and Hungary modernize their agricultural production and processing sectors. Poland is receiving gifts of food and farm inputs. These goods, in turn, are being sold domestically and the funds will be used to revamp Poland's farm sector.

### Critical Food Aid

The agricultural components of the aid program chiefly involve food aid to Poland. While all Eastern European countries face a long and painful adjustment process, Poland is also suffering food shortages.

As part of Poland's ambitious reform plan, prices are no longer set by administrative fiat. The result has been rampant inflation, which accelerated from 60 percent in 1988 to roughly 600 percent last year. However, the macroeconomic reforms seem to have taken hold, and recent reports indicate that many retail prices have stabilized.

Nevertheless, farmers have seen the prices of their inputs rise much faster than prices for their products. Consequently, they are withholding their crops and livestock from the markets. This has produced shortages of almost all major foods in the cities.

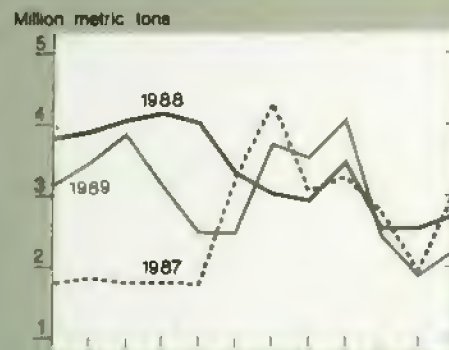


# U.S. Agricultural Trade Indicators

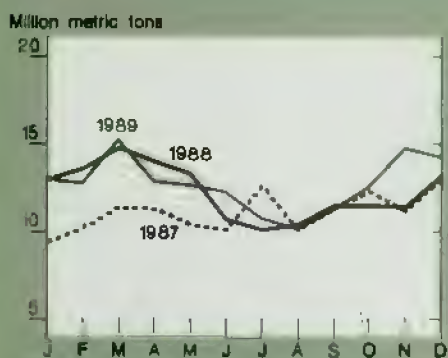
U.S. agricultural trade balance



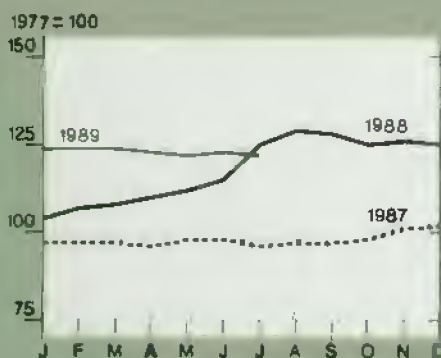
U.S. wheat exports



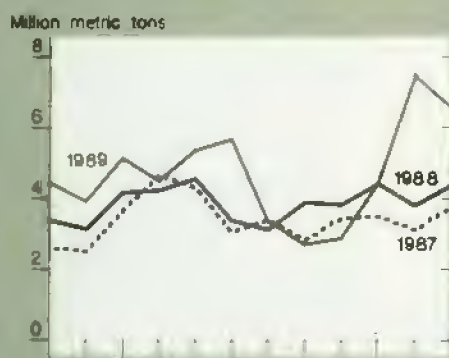
Export volume



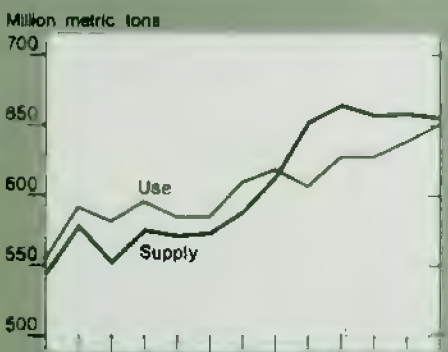
Index of export prices



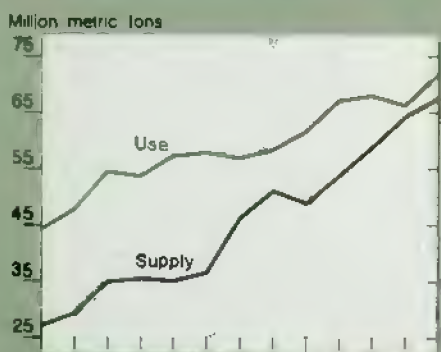
U.S. corn exports



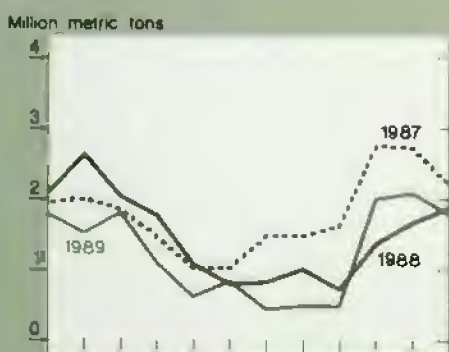
Foreign supply & use of coarse grains



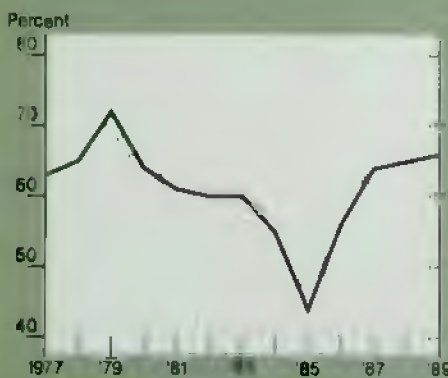
Foreign supply & use of soybeans



U.S. soybean exports



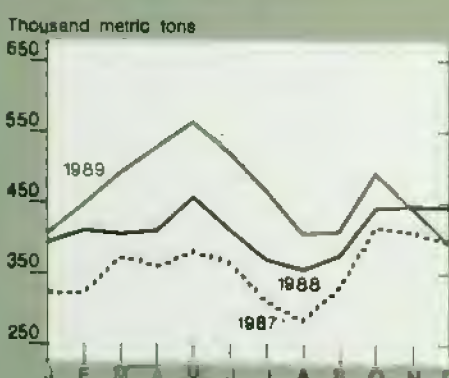
U.S. share of world coarse grains exports<sup>1,2</sup>



U.S. share of world soybean exports<sup>1,2</sup>



U.S. fruit & vegetable exports<sup>3</sup>



<sup>1</sup>Excluding intra-EC trade

<sup>2</sup>October-September years

<sup>3</sup>Includes fruit juices

## World Agriculture and Trade

### Food Aid Provided to Poland and Romania\*

#### TO POLAND

##### From the U.S.

Corn	400,000 m.t.
Butter	4,500 m.t.
Vegetable oil	22,000 m.t.
Rice	16,000 m.t.
Pork bellies	6,000 m.t.
Cotton	12,000 bales
Soybean meal	70,000 m.t.
Sorghum	11,500 m.t.

Total value \$128 million

##### From the EC

Wheat	800,000 m.t.
Corn	100,000 m.t.
Barley	200,000 m.t.
Beef	10,000 m.t.
Lemons	15,000 m.t.
Oranges	5,000 m.t.
Olive oil	5,000 m.t.

Total value \$186 million

#### TO ROMANIA

##### From the U.S.

Corn	500,000 m.t.
Butter	7,500 m.t.

Total value \$62 million

##### From the EC

Rye	125,000 m.t.
Corn	125,000 m.t.
Olive oil	5,000 m.t.
Beef	20,000 m.t.
Butter	5,000 m.t.

Total value \$62 million

\*Quantities shipped or approved for shipment.

Sources: U.S. Department of State, USDA Foreign Agricultural Service, and EC Commission News.

The U.S. has donated commodities held by the CCC under different programs. So far, 400,000 metric tons of corn and 4,500 of butter have been provided under Section 416(b) of the Agricultural Act of 1949. In addition, pork bellies worth \$10 million and soybean meal worth \$20 million have been provided under the Food for Progress Program.

Approximately 22,000 tons of vegetable oil (\$10 million), 16,000 of rice (\$5 million), and 12,000 bales of cotton (\$5 million) are to be provided under P.L. 480, the Food for Peace Program, as a concessional sale. All other commodities are being given to Poland.

In addition, under the Support for Eastern European Democracy Act, the U.S. will spend at least \$125 million for food aid to Poland in the current fiscal year. And USDA has sent a team of specialists from the Extension Service to Poland, where they will help with agricultural education and advisory services.

The EC has already shipped to Poland \$151 million worth of agricultural products from the Community's Intervention stocks. The first allotment of EC aid consisted of 500,000 metric tons of wheat, 100,000 of corn, 200,000 of barley, 10,000 of beef, 15,000 of lemons, 5,000 of oranges, and 5,000 of olive oil. A second allotment of 300,000 tons of wheat was scheduled for delivery in late winter.

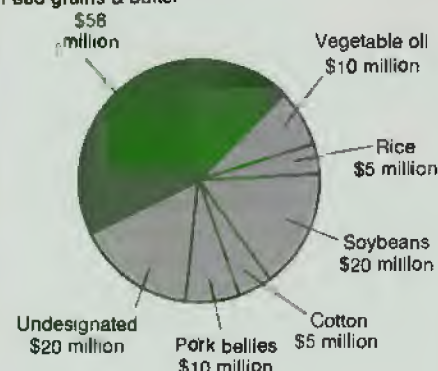
The governments of Iceland, Finland, Turkey, Japan, Austria, and Australia also have pledged food aid, including wheat, cheese, fish, and baby food.

Donated foods are sold to Polish consumers by recipient agencies at prevailing prices. The proceeds are then placed in a Counterpart Fund, which is being administered jointly by the Poles and the donor countries.

The fund will be used to promote structural adjustment in Poland's agricultural and food processing sector, especially to encourage family farming, develop pro-

### Feed Grains and Butter Make Up Nearly Half of U.S. Food Aid to Poland

#### Feed grains & butter



\$128 million  
shipped or approved  
for shipment

cessing plants and marketing operations, and improve training facilities. Already, 254 project applications have been received by the fund.

### Shortage of Inputs

Polish authorities have stressed the need for fertilizers, pesticides, and tractors to boost agricultural output. Of the \$363 million in credit set up by the EC for Poland and Hungary, \$121 million is to be available to finance sales of agricultural inputs in Poland.

The EC Commission recently opened tenders for \$60.5 million worth of fertilizers, pesticides, and fungicides, to be sold through the U.S.-financed Foundation for the Development of Polish Agriculture. The proceeds will be placed in the Counterpart Fund.

Poland might again face food shortages in the fall and winter, because plantings are reported to be down and farmers likely will continue to hold onto their crops until prices rise. The Commission expects that aid will be furnished for the next year or two; then, the emphasis will shift to training and technical assistance.

In addition to donating its surplus agricultural commodities, the EC has granted trade concessions by cutting some import levies. Also, the Community has agreed to a three-tiered plan for reciprocal cuts



in quotas on nonfarm industrial products over a 5-year period.

The EC and Poland have agreed to extend scientific and economic cooperation in agriculture, farm machinery, the food and feed industry, vocational training, and the environment.

For Romania, the Community has provided food aid consisting of 20,000 metric tons of beef, 5,000 of butter, 5,000 of olive oil, 125,000 of corn, and 125,000 of rye. The U.S. has pledged 500,000 tons of corn and 7,500 of butter (together worth about \$62 million).

Because there seems to be less focus on market-oriented reform in Romania, and because Romania is in a better position to pay for food products, it has not been included in the OECD economic assistance program. As the tide of reform spreads through Eastern Europe, however, the scope of the assistance will have to widen.

## The Outlook

The EC Commission plans eventually to eliminate quotas on food imports from Eastern Europe. Some EC farmers are already beginning to worry that by providing aid to Eastern European farmers, the EC is creating competition for its own farm sector.

Hungary has traditionally been a net food exporter, as have Bulgaria and Romania. Poland is a net importer, and will probably continue to be for some time. But like other Eastern Europeans, the Poles will want to export agricultural products in order to earn desperately needed hard currency.

While EC farmers can expect more competition from their neighbors to the east, they also can look forward to new opportunities. As the benefits of economic and political reform begin to appear, Eastern Europeans will want a greater variety of foods, particularly Mediterranean produce and high-value processed foods. The EC is ideally situated to satisfy this long-neglected consumer demand.

[Mary Lisa Madell and Kenneth Weiss (202) 786-1610] ■

# U.S.-Canada Corn-Broiler Dynamics

If world markets become more open, international price transmissions will become more of a concern for farmers, consumers, and policymakers. USDA research suggests that world prices of coarse grains, for example, could rise if the GATT talks succeed in liberalizing trade (see the special article in the October 1989 *Agricultural Outlook*).

To estimate how corn price increases would impact one group of corn buyers, broiler producers, two statistical models were used to examine the effects of a hypothetical one-time 10-percent increase in corn prices on broiler prices in the U.S. and Canada.

The model shows that the U.S. broiler price responses would last longer, peak faster, and be more erratic than the broiler price responses in Canada. Yet Canadian broiler price increases would be generally more pronounced than U.S. price responses.

## In the U.S....

If corn prices rose by 10 percent, the research shows, broiler prices at the producer level in the U.S. would start climbing immediately, with a maximum monthly increase of 3.9 percent over the benchmark occurring in the fifth month. Broiler prices would continue to rise at slower rates for another 27 months.

Over the entire period, each percentage-point increase in corn prices would lift producer broiler prices by nearly four-tenths of a percentage point.

On the retail level, broiler price increases would resemble the producer price pattern, but the rise would be smaller. Prices would jump immediately, with a maximum monthly gain of 2.8 percent over the benchmark in the fourth month. The effects would endure through the

thirtieth month after the corn-price hike. Over the 30 months, each percentage-point jump in corn prices would pull up retail broiler prices by less than one-fifth of a percentage point.

The impact of the corn price increase on retail broiler prices would be diluted by the other components of retail prices: packaging, marketing, and transportation costs.

## In Canada...

Broiler price increases at the producer level in Canada would be delayed by a month, but would build in strength through the fifteenth month, peaking then at a 4.3-percent gain over the benchmark. Farm broiler prices would continue up at smaller rates for another 7 months.

On the retail level, the increase in Canadian broiler prices would occur immediately, gain in strength through the sixteenth month, with a maximum monthly increase of 2.9 percent over the benchmark, and continue up at slower rates for another 6 months. But, the Canadian broiler price responses would taper off 8 to 10 months sooner than the responses in the U.S.

On a cumulative basis, each percentage-point increase in Canadian corn prices would boost producer broiler prices by about four-tenths of a percentage point and retail broiler prices by less than a third of a point.

Although the U.S. price increases would last longer than the Canadian, the latter would be larger in most months. On a month-to-month basis, U.S. price responses would be more volatile. In both countries, retail broiler price rises would be less pronounced than at the producer level.

Some of the differences in the price responses between the two countries may reflect their differing market structures. In Canada, the provincial governments control broiler output through marketing quotas, and the federal government sets an import quota in an attempt to stabilize prices. In the U.S., broiler production is

## World Agriculture and Trade

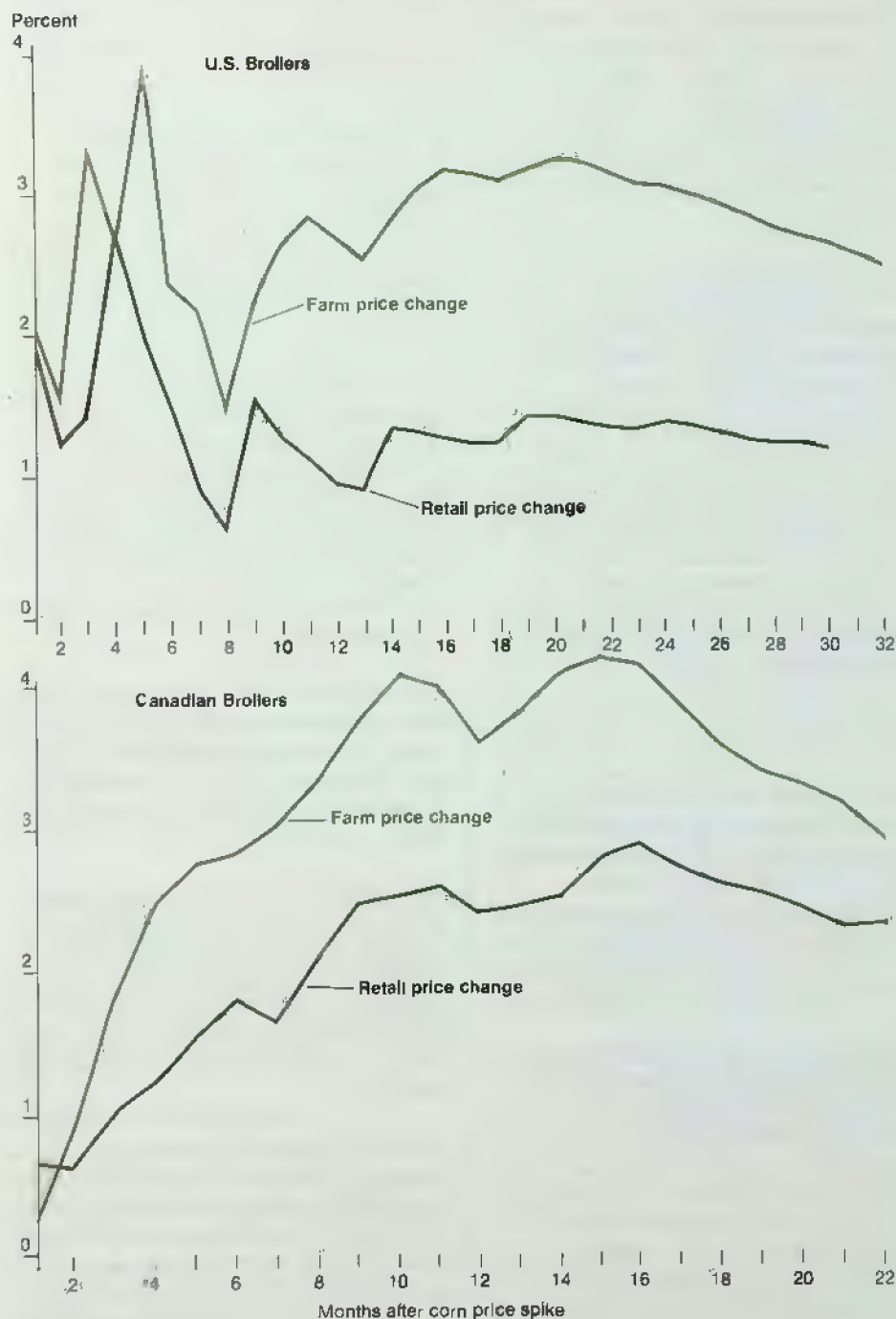
largely unregulated, although the top 20 firms account for about 80 percent of the output.

Under the U.S.-Canada Free Trade Agreement, Canada's global import quota on chicken and chicken products increased from 6.3 to 7.5 percent of its

domestic production in the previous year. However, corn is not mentioned in the agreement. Nonetheless, because trade in other coarse grains and wheat between the two nations may become more open as a result of the agreement, broiler feed costs may rise. This is proxied here by corn prices.

If a more liberalized trading environment results from the current GATT negotiations, Canada's intervention in its broiler markets may be phased down. As production and import controls are loosened, Canada's broiler-price responses may become more similar to the responses in U.S. prices.

How U.S. & Canadian Broiler Prices Would React to 10-Percent Spike in Corn Price



### About the Model

Historical corn/broiler price movements were summarized for the U.S. and Canada in separate models. Two vector autoregression (VAR) models of corn prices, producer broiler prices, and retail broiler prices were estimated, one for the U.S. and one for Canada.

Each model summarizes how a nation's three prices have moved together on a monthly basis for a 20-year period through 1987. Such dynamics are useful in determining how history would have handled a one-time 10-percent shock in each country's corn price.

While the procedure assumes that only corn price changes affect broiler prices in each model, the simplification is useful when corn-based feed prices rise because of some corn-related policy change. The change could be in an agricultural stabilization policy or in a trade policy.

To construct the U.S. model, the PPI's for corn and broilers/fryers and the CPI for fresh whole chicken from the Bureau of Labor Statistics, U.S. Department of Commerce, were used.

Agriculture Canada provided the Canadian farm prices of corn and broilers. The retail index of Canadian broiler prices compiled by Statistics Canada was used for retail broiler prices.

All analyses accounted for seasonal effects and time-dependent influences. [Ronald A. Babula (202) 786-1785, Robert F. J. Romain (418) 656-7946, and Gregory R. Gajewski (202) 786-3313] ■



## Farm Income Steady In 1990

**T**he U.S. cash farm income picture for 1990 has improved somewhat compared with USDA's earliest projections for this year, made last November. Combined with continuing strong demand for agricultural products, currently higher prices due to tighter corn stocks and smaller hog inventories have brightened the outlook.

Forecast corn exports are larger than last fall, while cattle numbers and winter wheat plantings are lower than originally forecast. In general, these developments increase the odds for the steady-state 1990 income picture that was presented at USDA's November 1989 Outlook Conference.

A gain of \$2-\$8 billion over last year in cash receipts and perhaps only a slight increase in cash expenses underlie the income prospects. Net cash income could grow about 6 percent, from \$53 billion in 1989 to \$54-\$58 billion this year. Net cash income focuses on the value of commodities sold in a calendar year plus government payments, less cash costs.

Net farm income is expected to be \$45-\$49 billion this year, steady to down 8 percent from last year. Net farm income measures the value of agricultural production in a calendar year plus government payments, less all costs.

Net farm income may drop as feed grain prices ease from the spikes caused by the 1988 drought. The lower prices will dampen the value of this fall's harvest. Much of the fall harvest will be sold in 1991.

### Record Receipts

This year's cash receipts could total \$160-\$166 billion; both crop and livestock receipts are forecast to reach record highs. Crop sales could be nearly \$80 billion. In constant 1982 dollars, this



would be about \$60 billion, the highest since 1985. During 1986-89, constant-dollar cash receipts for crops averaged \$57 billion a year.

Livestock receipts are expected to be up slightly from 1989's \$83 billion. In inflation-adjusted dollars, 1990 livestock receipts could be lower than each of the past 3 years, although slightly above the 1985-86 average of \$63 billion.

Sales of red meat could be up 4 percent, pushed by a \$1-billion gain in hog receipts. The farm price of hogs is expected to be 10-15 percent above the 1989 average, with stable production.

Poultry receipts are likely to remain \$14-\$15 billion: a 6-8 percent gain in broiler production will almost offset an expected price drop of 8-10 percent. Dairy receipts could be down 5-10 percent from 1989 because of lower prices.

Feed grains and hay usually account for 20-25 percent of all crop receipts and may generate more than half of the overall increase this year. Corn sales could be \$2-\$3 billion (19-28 percent) more than in 1989.

Since more than half of the fall corn crop tends to be marketed the following winter and spring, the 50-percent production

gain in the 1989 crop is boosting 1990 sales. The average price of corn this year is expected to drop 8-10 percent below 1988.

### Lower Government Payments

Direct government payments probably were less than \$11 billion in 1989, down more than 25 percent from 1988. Payments are projected to drop another 15 percent this year. Most of the decrease reflects less disaster assistance. Disaster assistance totaled nearly \$3 billion in 1989, but is expected to be less than \$500 million in 1990, barring another drought.

The trend to lower wheat and corn prices could result in higher payments for these commodities, while recent price strength could shrink payments for cotton and rice in 1990. Commodity program payments (mostly deficiency payments) may be nearly \$6.5 billion, compared with \$6 billion in 1989 and almost \$11 billion in 1988.

Based on current Conservation Reserve Program enrollment, conservation programs probably will account for about 20 percent (\$2 billion) of all payments in 1990.

Production expenditures climbed about 6 percent in 1989, to an estimated \$143 billion, and could remain between \$142 and \$146 billion in 1990. Cash expenses this year may be less than 1 percent over 1989's \$121 billion.

The index of prices paid for feed could average about 15 percent less than in 1989, reflecting 20-25 percent lower soybean meal prices, 7-10 percent lower corn and hay prices, and a drop of more than 20 percent in the average annual

## Farm Finance

price of oats. Lower feed prices are behind most of the 10-percent fall expected in feed expenses.

Prices of fertilizer, fuels, and chemicals are forecast up 5-10 percent, so manufactured input expenses could climb \$1 billion (5 percent). Interest expenses probably will stay near \$15 billion for the third consecutive year.

### Large Midwest Gains

Although the net cash income of the farm sector as a whole may grow 6 percent in 1990, producers in the Southeast, Northeast, and South Central regions may register gains of only 3 percent or less. The \$2-billion increase in net cash income for the Midwest is 60-65 percent of the total gain expected in the farm sector. Farmers in the West could see their net cash incomes grow by more than \$1 billion in 1990.

Larger poultry receipts likely will boost livestock receipts in the Southeast. Although poultry receipts are expected to grow less than 5 percent nationally, farmers in the Southeast will get 35-40 percent of the gain. Although fruit and vegetable receipts nationally are expected to be up, the winter crops were damaged by the freeze in Florida.

The Southeast also accounts for almost 20 percent of oil crop receipts. Soybean prices could be down 15-20 percent from last year, although peanut sales may be up 25 percent nationally. A \$250-million drop in government payments to the Southeast could partially offset the 3-percent gain in crop receipts and keep net income there from climbing more than 3 percent.

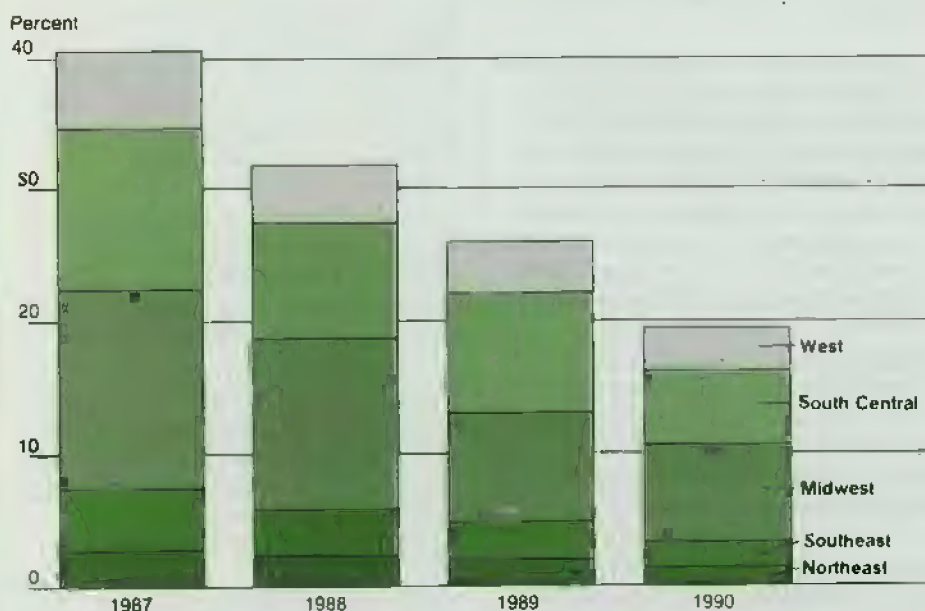
In the Northeast, net cash income may be up slightly. The Northeast provides about 20 percent of farm receipts nationally from dairy products and 10-15 percent of cash receipts from poultry. Despite strong poultry receipts, if dairy receipts decline as expected, Northeastern livestock cash receipts could dip nearly 3 percent.

Midwest Farmers To Post Largest Income Gain

	Crop receipts	Livestock receipts	Direct payments	Cash expenses	Net cash income
\$ billion					
<b>Northeast</b>					
1989	3.8	7.2	0.2	7.7	3.9
1990	4.1	7.0	0.2	7.7	3.9
<b>Southeast</b>					
1989	12.5	12.3	0.8	16.8	10.4
1990	12.9	12.5	0.5	16.8	10.7
<b>Midwest</b>					
1989	27.8	36.3	5.9	52.8	19.0
1990	30.4	36.7	5.6	53.3	21.1
<b>South Central</b>					
1989	8.9	13.0	2.3	17.4	7.8
1990	9.2	13.3	1.4	17.4	7.5
<b>West</b>					
1989	21.3	14.4	1.5	26.3	11.9
1990	22.5	14.5	1.3	26.4	13.0

Both 1989 and 1990 forecasts as of March 16, 1990.

In All Regions, Government Payments Drop as Share of Gross Cash Income



1990 forecast.

Although the Northeast provides less than 10 percent of all fruit and vegetable receipts and less than 5 percent of feed grain receipts, these crops are important locally and probably will be responsible for boosting crop receipts.

The South Central states account for about 25 percent of poultry receipts, over 50 percent of cotton sales, and 20-25 per-

cent of feed grain receipts. U.S. cash receipts for cotton are expected to be stable in 1990, but rice receipts could increase as much as 15 percent nationally.

Lower deficiency payments in the South Central states could offset the 3-percent higher cash receipts, and the region's net cash income could be down from 1989.



## Biggest Gain In Net Cash Income Likely In Midwest



Projected change in net cash income, 1989-90, in black  
Average net cash income, 1987-88, in color

In the Midwest, a projected \$2-\$3 billion gain in food grain and feed crop receipts probably will boost farmers' crop receipts. Since the Midwest accounts for 45 percent of all food grain sales and 70 percent of feed crops, crop cash receipts could be up nearly 10 percent there in 1990.

U.S. hog prices could average \$5 per cwt higher than last year, and are likely to nudge up the Midwest's livestock receipts. Although direct payments to the Midwest may be down 6 percent (\$350 million), and cash expenses up \$500 million, farmers' net cash incomes could be about 10 percent bigger there.

Farmers in the West may have over \$1 billion more crop receipts in 1990. Western farms usually provide 25 percent of the nation's food grain receipts, almost 35 percent of cotton, and 55 percent of vegetable cash receipts. Both food crop and vegetable receipts could be up 6-8 percent nationally.

Direct payments may be down about 10 percent in the West, mainly because of lower rice and cotton deficiency payments forecast for 1990. With stable cash expenses, farmers in the region could see their net cash income increase 7-10 percent this year.

Regional shares of direct government payments have been fairly stable for the last 5 years. For 1985-89, Midwestern farmers have grown the most feed and food grains of any region and have received 55-65 percent of direct payments; farmers in the South Central region have collected 15-24 percent; the West, 12-16 percent; the Southeast, 5-7 percent; and the Northeast, less than 3 percent.

Just as total payments have declined since 1987, so has their contribution to incomes in all five regions. In 1987, direct payments were 15 percent of gross cash income in the Midwest, but they are forecast to be 7-8 percent in 1990.

Farmers in the South Central region may see payments fall from 12 percent of gross income in 1987 to less than 6 percent this year. In the Southeast and the West, farmers' payments may be 2-4 percent of income, compared with 5-6 percent in 1987. [Diane Bertelsen (202) 786-1808] ■

## Farmer Mac Ready To Go

In January, the Federal Agricultural Mortgage Corporation, or Farmer Mac, released its security guide, marking the kick-off of the new secondary market for farm real estate and rural housing mortgages. The manual outlines final underwriting standards and operating rules and procedures. Farmer Mac officials are now ready to approve the first loan pools for sale.

In a secondary market, lenders sell loans to investors. In the primary market, lenders—called originators—make loans to borrowers. Loans sold through the Farmer Mac market will be bundled together (pooled) by a financial intermediary (pooler), and securities backed by the pool will be sold to investors based on the economics of the loans in the pool.

Farmer Mac, which has the ability to borrow from the U.S. Treasury if needed, enhances the value of the securities sold by guaranteeing investors timely payment of principal and interest.

Some preliminary data suggest that farm lenders in 12 Corn Belt, Lake, and Northern Plains states will be most active in Farmer Mac, while banks in Eastern states will be less active.

Farmer Mac could broaden farmers' access to long-term real estate financing at fixed interest rates. If Farmer Mac becomes widely used, farmers could see less variation in lending terms, loan documentation, and interest rates as the market standardizes farm real estate loans much the way secondary markets have done for housing loans.

Because the new market will make it easier and less risky for lenders to specialize, lending costs could fall and farmers could pay somewhat lower interest rates. However, any benefits will pass mostly





Some FCS lenders will undoubtedly use Farmer Mac as a marketing and risk-management tool. Others appear to be taking a wait and see attitude on how competitive the Farmer Mac market will be as a source of funds. Six FCS districts have formed the Farm Credit Mortgage Corporation to act as a national pooler for FCS or non-FCS originations.

Two life insurance companies say they are interested in pooling loans. Five life insurance companies appear on the stockholder list, but some may not originate mortgages because of the costs involved.

However, they might buy Farmer Mac securities or use the market to sell existing mortgages they now hold. Life insurance companies currently tend to specialize in financing agribusiness.

### Factors To Watch

Will Farmer Mac be able to attract investors at a price that lenders and farm borrowers can profit from? Can it deliver to borrowers funds that are competitive with the FCS?

Farmer Mac's benefits to farmers and its growth prospects hinge on how competitive the market can be with other sources of funds, after fees are paid for pooling, servicing, trusts, security issues, and the Farmer Mac guarantee. Loan pools and securities will need to be structured to keep operating costs down.

How the required reserve portion of loans sold through Farmer Mac will be handled between originator and pooler will in part determine lenders' activity. Farmer Mac requires that 10 percent of a mortgage sold into the market be held against future losses. This could be held by the originator as a subordinated participation interest, or it could be sold to the pooler or investors. The lender may have to hold more capital if the 10-percent portion is not sold.

Banks and other regulated lenders face new capital requirements at the end of 1990. These requirements will state how much capital a bank must hold against

the chance a loan sold through Farmer Mac goes bad. The guidelines could affect the profitability of Farmer Mac mortgage sales for some lenders by increasing capital requirements.

For banks, the need to improve liquidity is a major incentive to sell loans in a secondary market. But, currently there does not appear to be a pressing need for liquidity among the lenders.

Because Farmer Mac will deal only with fixed-rate mortgages, at least initially, farmers' demand for fixed- versus variable-rate mortgages also will help determine how fast the market grows. Variable-rate mortgages are more tied to short-term interest rates. So, when short-term rates are low relative to long-term rates, the demand for fixed-rate mortgages weakens.

The volume of farmland transactions and the demand for credit to finance these transactions will influence the start-up of the market as well. Demand for farmland credit is projected to increase only modestly in 1990. *[Steve Koenig and Cliff Rossi (202) 786-1893]* ■

## Payments Go To Largest Farms

Data from the 1988 Farm Costs and Returns Survey (FCRS) show that government payments to farmers are distributed on the basis of production, in accord with the 1985 farm bill.

One of the main purposes of the 1985 farm bill was to increase farmers' cash incomes. In that year, 12 percent of farmers had both negative cash flows and debt-to-asset ratios of 40 percent or more, indicating that they were in financial distress.

At the same time, the farm bill was intended to reduce the large existing grain stocks by controlling production through the Acreage Reduction Program (ARP). The mechanism used to effect these policies routes most government payments directly to farmers through deficiency payments and CCC nonrecourse loans. Both methods of payment are based on the amount of a supported commodity produced.

### Lorenz Curve Analysis

A Lorenz curve helps depict the distribution of direct government payments. It consists of a plot of the accumulated percentages of one variable against the accumulated percentages of another. If payments are distributed equally, the curve is actually a straight 45-degree line. The more skewed the distribution, the more the curve sags downward from the diagonal.

The accompanying figure entitled "90 Percent of Farms Receive Only 12 Percent of Direct Payments" compares the distribution of government payments to

## Farm Finance

### Distribution of Payments Reflects '85 Farm Bill

Item	Payments per reporting farm	Percent of total payments	Percent of major program commodity sales	Payments as percent of gross cash income	Percent of farms reporting payments	Percent of all farms	Pct of farms reporting payments in class	Pct. total planted program acreage
ALL FARMS	\$14,257	100.00	100.00	8.06	100.00	100.00	35.86	100.00
<b>SALES CLASS</b>								
<b>Commercial</b>								
\$500,000 or over	\$56,571	13.63	18.78	3.55	3.43	1.97	62.67	13.11
\$250,000 to \$499,999	\$35,599	20.61	24.53	8.95	8.26	3.98	74.39	19.25
\$100,000 to \$249,999	\$21,364	36.49	34.84	11.27	24.35	11.70	74.62	36.35
\$40,000 to \$99,999	\$10,917	19.33	15.25	11.23	25.24	14.04	64.47	20.29
<b>Noncommercial</b>								
\$10,000 to \$39,999	\$ 4,930	8.56	5.78	9.15	24.75	22.86	38.83	8.79
\$9,999 or less	\$ 1,410	1.38	0.82	3.83	13.96	45.44	11.02	2.21

the number of farms receiving government payments and the total number of farms in the U.S. The distance of both curves from the diagonal shows that, per farm, government payments are highly unequally distributed.

Of all farms receiving government payments, 32 percent receive 90 percent of the payments. On the basis of all farms—those receiving payments or not—the unevenness is even more marked. Sixty-four percent of all farms receive no direct government payments, so 90 percent of government payments go to 12 percent of the total farms.

This distribution is expected because the basis for government payments for crops established in the 1985 farm bill was solely units of production.

The second accompanying figure, entitled "Government Payments Are Based on Production," compares Lorenz curves for the number of participating corn specialty farms (that is, farms receiving more than 50 percent of their gross cash income from corn) and program corn production.

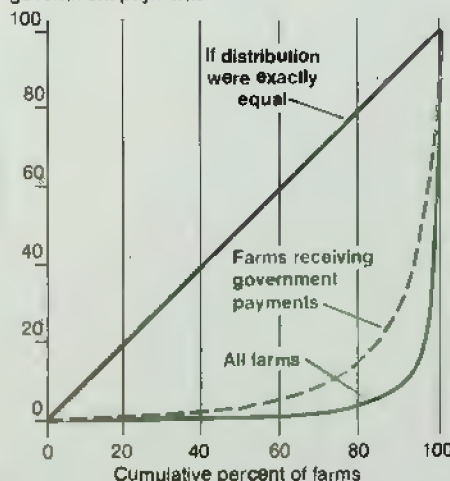
The curve labeled "Program corn production" shows the relation between the cumulative percent of program crop production and the cumulative percent of direct government payments. As an example of the interpretation of the curve, if each farmer received the same government payment for each bushel of

corn produced, the curve would be a straight line exactly on the diagonal.

Here the curve is slightly lower than the diagonal, since some payments are associated with minor program elements other than corn which are not covered by the payment limitation. Program yields, frozen by the 1985 farm bill, also affect the distribution. The Lorenz curve for corn production and government payments illustrates clearly that payments are distributed almost completely on the basis of production, regardless of farm size.

#### 90 Percent of Farms Receive Only 12 Percent of Direct Government Payments

Cumulative percent of direct government payments



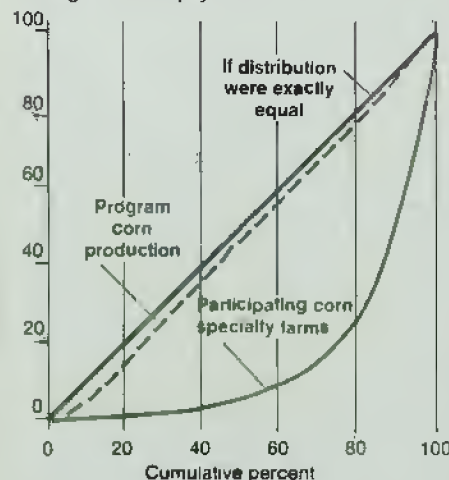
Data from FCRS for 1988.

### Income Share Analysis

The share of gross farm income (total farm income before expenses) made up by government payments provides another measure of government payment distribution by farm size. For farms with sales between \$40,000 and \$249,999, payments are about 11.2 percent of gross income. This group received approximately 50 percent of government payments in 1988.

#### Government Payments Are Based on Production

Cumulative percent of direct government payments



Data from FCRS for 1988.



## Farm Finance

About 9 percent of gross income was government payments for farms with sales between \$250,000 and \$499,999. Some of these farms hit the \$50,000 ceiling on payments. The category above that—the largest farms—had a much lower percentage as they hit the \$50,000 payment limit.

Note that the average payment per farm for the highest sales class is above the \$50,000 limit. There are several reasons for this. The type of business organization which would be considered a single farm for the survey may allow several individuals associated with the farm each to receive up to the \$50,000 limit. Also, payments received in one calendar year can bridge two crop years. Finally, a portion of payments have a limit of \$250,000 rather than \$50,000.

The smaller, noncommercial farms, with \$10,000 to \$39,999 in sales (\$40,000 is used here as the lower limit for classification as a commercial farm), received a smaller share of government payments in relation to gross farm income than the lower two sales classes of commercial farms. The two smallest noncommercial classes each have a much smaller share of farms which report any payments.

The smallest sales class, less than \$10,000, has only 11 percent reporting government payments, while in the next largest sales class, 39 percent reported receiving government payments. This compares with 64 to 75 percent of the farms receiving government payments in the larger sales classes. Finally, the percent of total planted acreage consisting of program crops is much lower in the smallest two sales classes.

For farms with nonprogram crops or low production, the current supply-control programs provide little in the way of income stabilization. *[Gerald Whittaker (202) 786-1800]* ■

## Expansion Likely To Continue

The fourth quarter of 1989 and January 1990 probably mark the low point of the current growth slowdown. Continued moderate improvements in net exports and the effects of earlier interest rate declines are likely to keep the economy expanding through 1990.

Modest economic growth and a monetary policy aimed at holding inflation low probably will succeed in keeping the underlying inflation rate on a downward trend. Lower inflation will reduce pressure on interest rates and allow them to slide somewhat through the year.

Unexpected changes in oil or food prices and the unfolding events in Eastern Europe provide the major uncertainties surrounding this outlook.

While the most likely outlook remains mildly optimistic, several early 1990 indicators were heavily influenced by unusual events—strikes, weather changes, and unexpected foreign political developments—making interpretation difficult.

Further, disappointed expectations that interest rates would decline in the early months of 1990 have led some analysts to conclude that the economy will grow much more modestly than anticipated only a few months ago. Now, there is greater uncertainty among analysts about the prospects for the year.

Real GNP grew less than 1 percent at an annual rate in the fourth quarter of 1989, the lowest since mid-1986. Most of the quarter's growth came from an 8.6-percent jump in exports and the year's largest gain in consumer spending on services.

## General Economy



Expenditures on consumer durables fell at an annual rate of 14 percent, and spending on residential building and business spending on plant and equipment slipped as well.

### Slower Industrial Production

The weakening industrial sector has prompted renewed concern about sliding into a recession. Industrial production was up 3.4 percent in 1989, but slowed progressively through the year. By February 1990, production was a scant 0.9 percent ahead of February 1989.

Capacity utilization dropped nearly 2.4 percentage points from February 1989, which was the high for the decade. Federal Reserve tightening in 1988 and early 1989, which brought on higher interest rates, is largely responsible for the manufacturing sector slowdown.

Slower real growth has been accompanied by lower inflation rates, although changes in inflation in 1989 and early 1990 largely reflected volatile energy and food prices. In 1989, a producer-price increase of 8 percent for finished goods in the first half cooled to 1.9 percent in the second. Excluding food and

## General Economy

### U.S. Exports to Eastern Europe Are a Small Share of Total Exports, But...

Importer	Total U.S. exports \$ mil.	Exports as share of country's imports Percent
<b>EASTERN EUROPE</b>		
Czechoslovakia	55	0.7
E. Germany	109	1.6
Hungary	78	0.8
Poland	304	1.7
Romania	203	1.4
Yugoslavia	534	3.4
USSR	2,768	6.2
<b>MAJOR U.S. TRADING PARTNERS</b>		
France	10,099	6.0
Japan	37,732	13.7
UK	18,403	13.1
Germany	14,331	4.5

### ...Provide Sizable Opportunities for Growth

Importer	Per capita total imports \$/person	Per capita U.S. imports \$/person
<b>EASTERN EUROPE</b>		
Czechoslovakia	503	3.52
E. Germany	422	6.57
Hungary	984	7.37
Poland	465	8.01
Romania	614	8.81
Yugoslavia	666	22.65
USSR	156	9.66
<b>MAJOR U.S. TRADING PARTNERS</b>		
France	2,994	180.99
Japan	2,250	307.70
UK	2,476	323.22
Germany	5,217	235.01

All imports and exports are for 1988. Merchandise trade only.

energy prices, 5.1-percent inflation in the first half retreated to 3.3 percent during the second.

Energy prices, the most volatile component of producer prices last year, soared 36.3 percent from January through June, but then fell 12.1 percent through December. Beginning in late 1988, the price of west Texas intermediate crude rose from \$10.31 a barrel to \$17.01 by April, then fell to \$15.57 by September. This January, prices jumped again, largely in response to the unusually cold December.

Interest rate declines in the second half of 1989 were mostly due to lower inflation. After rising throughout 1988 and the first 5 months of 1989, interest rates trended down through December and have remained relatively constant through March. Since last July, the federal funds rate has declined from 9.24 percent to 8.23. Last month, bank prime rates averaged 10 percent, down 1.5 percentage points from mid-1989.

For the year as a whole, real GNP grew 3 percent, off from 1988's 4.4-percent rate. Real exports grew 11.1 percent, follow-

ing spectacular 13.1- and 23.9-percent gains in 1987 and 1988. As a result, the real net export deficit improved from \$74.9 billion in 1988 to \$50 billion in 1989, the lowest since 1984.

Business spending on new plant and equipment grew 6.3 percent, although residential building fell 7.6 percent, the third annual decline. The number of goods-producing jobs fell by about 400,000 from January to December, as manufacturing and construction felt the effects of the interest rate rise from 1988. But consumer spending on services helped boost the number of nonagricultural jobs by 2.1 million.

This year, as the economy grows somewhat faster, much of the gain in the first half should be coming from consumer durables purchases and residential building. Barring continued increases in oil or food prices, inflation is likely to slow somewhat; more moderate growth, additions to capacity, and a relatively stable dollar should reduce upward price pressures.

According to recent Federal Reserve Board statements, monetary policy is likely to remain about the same as it has been, again suggesting that more moderate growth and lower underlying inflation will tend to bring interest rates down.

### Eastern Europe's Impact

Over the longer term, political liberalization of Eastern Europe could become one of the most important influences on U.S. economic growth. Since the new, more market-oriented economies are only beginning to emerge, it is difficult to assess their impact on the U.S. economy. But financial markets and trade developments are likely to be the conduits of the impact.

More open trading relationships with the liberalizing countries likely would result in more U.S. exports, which would stimulate employment and output. But those gains probably will be long-term, not short.



U.S. exports to the liberalizing countries accounted for only a small part of those nations' imports in 1988, and for only 1.3 percent of total U.S. exports. In the short term, even doubling U.S. exports to the liberalizing countries would result in only 1.3 percent higher total exports, which probably would have a minor effect on the U.S. economy.

In the longer run, however, the small shares highlight the opportunities the U.S. has to boost future exports. On a per capita basis, Japan in 1988 imported about \$308 of U.S. goods, while France imported \$181. In contrast, East Germany imported less than \$7 per capita, while the USSR imported a little less than \$10.

If per capita U.S. exports to the liberalizing countries rose to \$100 in 1988 dollars over the course of several years, U.S. exports to Eastern Europe would go up by a factor of 10. Total U.S. exports would jump by roughly \$37 billion (1988 dollars).

Direct U.S. exports to the liberalizing countries are not the only way they could stimulate the U.S. economy. Other industrial countries send a greater share of their exports to the Eastern Bloc, suggesting that a substantial amount of new export demand may initially move to these U.S. competitors. If these countries in turn enjoy faster export growth, their GNP's will rise, boosting their demand for U.S. goods.

For example, according to some researchers, an increase in inflation-adjusted exports equal to 1 percent of West German GNP would increase West German GNP by about 1.3 percent. During the same year, spillover effects of faster West German growth likely would increase real U.S. GNP by about 0.1 percent (about \$4.5 billion in 1982 dollars). West Germans and others would buy more U.S. products.

Currently, West Germany sends about 6 percent of its exports to the Eastern Bloc,

accounting for about 1.8 percent of West German GNP. West German exports account for a much larger share of East European Imports than any other major U.S. trading partner. Thus, the West Germans may more easily take advantage of established trading links, suggesting that their exports to the Eastern Bloc may rise more quickly than other Western countries'.

### Money Complications

Despite the long-term trade potential of the Eastern Bloc, many analysts have pointed out that the liberalizing countries will have to pay for their increased imports either by exporting more themselves, or by borrowing from abroad. Financing imports through borrowing is more likely in the short run, since it will take some time for the countries to develop export goods and markets.

According to this reasoning, the Eastern Bloc's greater credit demand, both to finance imports and to invest in much-needed infrastructure, could force up world-wide interest rates. The steeper rates then would curtail investment activity in the U.S. and other developed countries. Moreover, borrowing may be a problem for some already heavily indebted countries, like Poland and Hungary.

Some liberalizing countries, however, have a relatively large savings overhang, that is, private savings that have accumulated over time. Unlike many Western countries, few liberalizing countries have well developed credit markets, so at least at the consumer level, durable goods or big ticket items were usually purchased out of accumulated savings.

Further, consumer saving was forced, since government policy often limited consumer goods production and there were few goods available to buy.

How the savings overhang is dissipated is a key issue. Easier access to Western goods could result in a spending binge, initially pushing up imports and increasing the level of foreign borrowing necessary to finance these imports. But, the development of Western-style commercial banks, or their equivalent, might induce savers to keep the savings, providing some offsetting pressure to the expected credit demand increase.

Another and more immediate question for many of the liberalizing countries is when and at what rate their currencies will be made convertible to freely traded currencies. Without a convertible currency, the countries will be unable to obtain many of the benefits of a more market-oriented trading environment. *(Ralph Monaco and Elizabeth Mack (202) 786-1782)* ■

### Upcoming Releases From The Agricultural Statistics Board

The following list gives the release dates of the major Agricultural Statistics Board reports that will be issued by the time the next *Agricultural Outlook* comes off press.

#### April

- 3 Egg Products
- 4 Poultry Slaughter
- 6 Celery
- Dairy Products
- 9 Vegetables
- 10 Crop Production
- 13 Meat Animals-Production, Disposition, & Income
- Potato Stocks
- 16 Milk Production
- Turkey Hatchery
- 17 Floriculture
- 20 Cattle on Feed
- Cold Storage
- Livestock Slaughter
- 23 Catfish
- 25 Eggs, Chickens, & Turkeys
- 27 Peanut Stocks & Processing
- Poultry Production & Value
- 30 Agricultural Prices

## Resources

# The CRP & Wildlife Habitat

**B**esides cutting erosion and boosting water quality, another goal of the Conservation Reserve Program (CRP) is to enhance wildlife habitat on agricultural land. This prompts a question as to whether CRP participants are benefiting financially from promoting wildlife habitat.

The CRP establishes contracts with eligible farmers to set aside highly erodible or other environmentally sensitive cropland for 10 years. It requires participants to establish grass or tree cover on the enrolled land.

Although land enrolled in the program may not be farmed or grazed, participants are permitted to charge access fees for hunting, fishing, and other outdoor recreation. Money generated from these access fees is currently the only source of income, besides the government's annual rental payments, from the land enrolled in the CRP.

Nationwide, farmers earned less than 0.005 percent of their gross farm income from CRP access fees in 1987 and 0.002 percent in 1988.

Data from the 1987 and 1988 Farm Costs and Returns Surveys (FCRS) were used to determine how many CRP participants charge access fees and what these fees total. The two annual surveys, which differed slightly, questioned farmers as to whether they were CRP participants; whether they allowed hunting, fishing, and other outdoor recreation on their land; and whether they derived income from these activities.

FCRS findings indicate that only a small percentage of agricultural producers



enrolled in the CRP through the seventh sign-up period, 1988, were getting monetary benefits from hunting and fishing fees.

## Little Habitat Management

Even farmers who do not intentionally manage CRP land for wildlife may be able to benefit by charging access fees. But farmers who actually promote wildlife habitat, such as by planting field borders and windbreaks, have the greatest potential for additional income, since they can charge higher access fees.

Yet, because most farmers have not customarily charged for hunting and fishing, they may have little incentive to manage actively for wildlife habitat.

A different study found that a high percentage of CRP participants surveyed in Iowa and Virginia were interested in improving their CRP land for wildlife. In fact, 21 percent of the Virginia respondents claimed hunting opportunities for themselves to be their reason for wanting to improve their land. But the study also found that two-thirds were unaware of the opportunity to improve their land explicitly for wildlife habitat.

The effectiveness of land-retirement programs to supplement wildlife habitat depends on several factors: the type and

permanence of groundcover established on the idled land, the provision for proper nesting cover, and food and weather cover for the winter months. CRP participants have the option of planting 10 basic types of groundcover, with native and tame grasses being the most common.

CRP participants may believe that costs are higher for establishing and managing wildlife habitat than for the minimum mandatory cover. The Virginia study found that only 6 percent of those surveyed had their land in wildlife habitat plantings. And, of those uninterested in improving their CRP land for wildlife habitat, 16 percent claimed the additional expenses of management and plantings as the reason.

## How Many Charge?

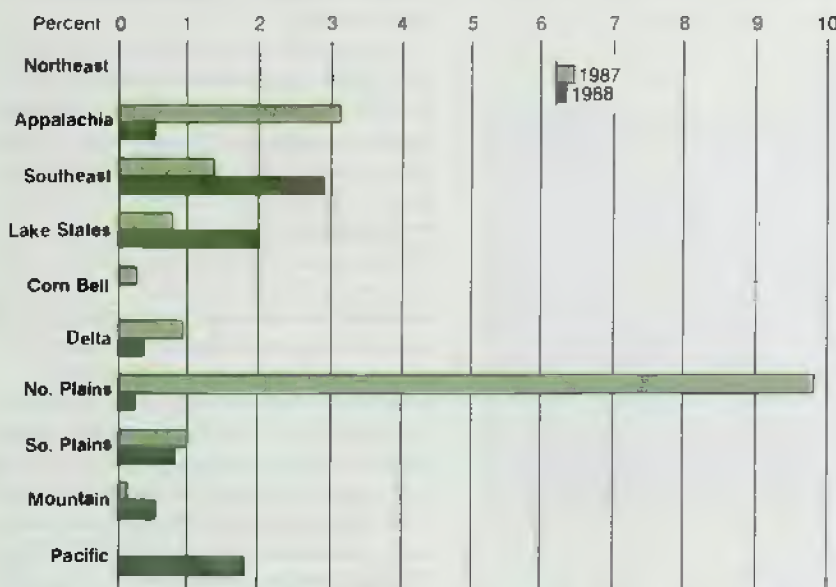
From the FCRS, the number of CRP participants was cross-tabulated with those producers who charge for hunting, fishing, and outdoor recreation, to determine the number of CRP participants in 1987 and 1988 who supplemented their income from access fees. Results were separated into the 10 agricultural production regions.

Approximately 3 percent of the CRP participants in the 1987 FCRS survey earned income from hunting and fishing access fees, while roughly a third of all farmers allowed hunting and fishing (both free and paid) on their lands. The Southeast and the Delta had the highest percentages of CRP participants who charged fees, 10 and 13 percent.

Only 2 percent of the CRP participants charged access fees in 1988. Unlike the 1987 survey, the 1988 survey found that the highest percentages of CRP participants charging fees were in the Lake States and the Southern Plains—4 and 7 percent.



## Only Small Share of Gross Farm Income\* Comes From Access Fees on CRP Land



\*Gross farm income of those producers who charge access fees on their CRP acreage.  
Data from FCRS.

Given the regional differences in the proportion of public and private land ownership, wildlife management and potential income from the CRP are likely to be distributed differently across regions.

In the 1987 survey, the Pacific and the Northeast had no producers enrolled in the CRP who were charging access fees. The large quantity of public land in the Pacific region—approximately half—may help explain why no participating farmer there charged an access fee in 1987.

The results for 1988 differ slightly. Again, two regions did not have any CRP participants who charged fees, but this time they were the Northeast and the Corn Belt. The reasons are unknown. But, one reason may be that 1988, unlike 1987, brought a severe drought, during which CRP participants were permitted to hay their land.

### Little Fee Income

Little income is derived from charging access fees for hunting, fishing, and outdoor recreation in most of the farm production regions. A total of just \$5 million was earned by all regions in 1987, and only \$2.7 million in 1988. Per-

haps the drought of 1988 lessened the quality of food and cover available for wildlife and hence the amount farmers could charge hunters.

Regionally, of those farmers participating in the CRP and charging access fees, farmers in Appalachia and the Northern Plains generated the highest percentages of gross farm income from access fees on CRP land in 1987, 3 and 10 percent.

Of the 10 production regions in 1988, participating farmers charging access fees in the Southeast generated the highest percent of gross farm income from access fees on CRP land, 3 percent. Farmers in the Lake States were in second place with 2 percent.

In 1987, participating farmers charging access fees in the Southeast, Lake States, Corn Belt, Delta, Southern Plains, and Mountain regions earned less than 2 percent of their gross farm income each from fees. In 1988, the Appalachian region, Delta, Northern and Southern Plains, and Mountain states earned less than 1 percent each.

There are many reasons for the low level of current benefits to farmers:

- the availability of free hunting areas,

- noncustomary nature of access fees,
- lack of awareness of the right to charge,
- lack of knowledge about how to manage for wildlife,
- reluctance to attract hunters for fear of vandalism, and
- the fugitive and nomadic nature of wildlife.

Producers who manage their lands to attract wildlife may earn either income or aesthetic pleasure in the future. But, as the surveys show, fewer CRP participants charged access fees in 1988 than in 1987.

Nonetheless, wildlife does not appear immediately after habitat improvements are put in place. Establishing a healthy habitat takes time, and breeding significant populations does too. Perhaps, if the amount of wildlife continues to grow, so will the income farmers earn from access fees.

Yet as the amount of wildlife grows, the scarcity value of wildlife will decline, and outdoor recreationists may continue to pay lower fees or none for the use of private land. [Rhonda Bucklin (202) 786-1401] ■

### Upcoming Economic Reports

Summary Released	Title
April	
2	Tobacco
10	World Ag. Supply & Demand
18	Agricultural Outlook
19	Dairy
20	Livestock & Poultry Update
	Agricultural Resources-Land Values Summary
23	Rice
	U.S. Agricultural Trade Update
26	Oil Crops
27	National Food Review

## Policy

# Pesticide Regulations In Flux

**S**everal bills pending in Congress aim to speed EPA's reaction when there is evidence that a pesticide creates an unreasonable risk to human health or the environment. President Bush also has proposed a food safety plan to establish a more consistent and credible system for pesticide regulation.

The bills before Congress and the President's plan also seek to adjust and standardize the criterion by which pesticide products used on food crops would be evaluated for registration purposes. They would set "negligible risk" as the new uniform standard for potential carcinogens in processed foods. In the past, EPA has defined negligible risk as one additional case of cancer per million people over a lifetime of exposure. This criterion is being re-examined by EPA, and no decision has been reached.

Depending on these bills' fate in Congress, they could lessen risk of environmental contamination, ensure food safety, protect consumers' health, and cut potential health hazards for farmers and professional pesticide applicators. However, crop yields could be pushed down, putting upward pressure on food prices.

## Some Background

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which stipulates requirements for registration and use of pesticide products, was last amended in 1988. The amendments were intended to help EPA reevaluate the 600 active ingredients used in making approximately 50,000 pesticide products now being sold.



Earlier amendments to FIFRA, passed in 1972, required the EPA to assure that products registered prior to 1972 met contemporary standards for human and animal toxicity and the environment. However, the retesting process was so laborious that between 1972 and 1986 the EPA had completely evaluated only one active ingredient. Meanwhile, the remaining chemicals are somewhere in the reregistration process, and thus many of them are still in use.

The 1988 FIFRA amendments provided EPA with increased funding from registration fees levied on chemical manufacturers. Congress agreed that priority for scheduling reregistrations would be based on the potential effects of the chemical on the food supply or ground water, the existence of outstanding data gaps, or evidence of adverse health effects to industrial or farm workers from excessive exposure.

However, no attempt was made to reconcile differing pesticide registration requirements that exist simultaneously in FIFRA and in the Federal Food, Drug, and Cosmetic Act (FFDCA).

Pesticides must be granted tolerances (the setting of maximum allowable residues) under the FFDCA before they can be registered for use on food crops. For crops and unprocessed foods, FIFRA contains a risk-benefit clause, allowing

the risks associated with the use of pesticides to be weighed against their economic benefits.

On the other hand, for processed foods, the FFDCA's Delaney Clause prohibits establishing any tolerance for a pesticide calculated to induce cancer in laboratory animals, regardless of whether its residue level is judged to pose a hazard to human health.

Since EPA cannot register a pesticide for food crop uses without a FFDCA tolerance, it cannot grant a registration to newer and, in many cases, less toxic pesticides if they pose even a negligible cancer risk when consumed in processed food. Meanwhile, older and sometimes more risky pesticides remain on the market pending EPA review under the reregistration process.

At the same time, EPA has written a new protocol for pesticide products posing a negligible cancer risk. The protocol substitutes negligible risk for zero risk (i.e., no carcinogenicity) and proposes this standard as the spirit rather than the letter of the FFDCA's Delaney Clause. Thus, some new pesticides that would fail the strict zero-risk implementation of the Delaney Clause would be granted registration.

## Waxman Bill (H.R. 1725)

Congressman Henry Waxman (D-Cal.), through the Food Safety Amendments of 1989 to the FFDCA, proposes a negligible risk-based food safety standard to replace the risk-benefit standard that EPA currently uses to determine whether to register a pesticide.

The proposed negligible risk standard would be applied to all chemical pesticides on an individual basis over a 4-year period. Those products that pose greater than a negligible risk that cannot be modified would be subject to cancellation.

By 6 years after enactment, the EPA would further have to assure that using several common pesticides together on the same crop would pose no more than a



negligible risk when maximum tolerance levels were summed.

Backers of the bill contend that the proposals would speed removing potentially harmful pesticides from the market and cut human exposure to manmade carcinogens in the food supply.

Opponents of the Waxman bill contend that it could severely restrict the types and number of pesticide products now being used without considering the economic benefits they offer.

As it is now, critics say, pesticide reregistration fees imposed by the 1988 FIFRA amendments have caused many manufacturers voluntarily to cancel registrations of minor-crop pesticides or specific, small-scale uses of some chemicals. They say the new proposal could further cut farmers' options for pest control.

### ***De la Garza Bill (H.R. 3292)***

A second bill, the Food Safety Assurance Act of 1989, is sponsored by Rep. E. (Kika) de la Garza (D-Tex.). It differs from H.R. 1725 in two ways.

First, for pesticides that pose greater-than-negligible risk, the benefits would be considered in establishing residue tolerances in food, but the method for determining benefits would be altered. Rather than assessing the economic benefits of using a pesticide, total societal benefits would be calculated.

That is, if the risks of a pesticide are more than negligible, its use would be weighed against the dietary risks to consumers of not having the particular food that the pesticide makes available.

Second, under the de la Garza bill, the negligible risk standard would apply only to individual active and inert ingredients, allowing the combined risk of several pesticides used on the same crop to be greater than negligible.

In addition, the de la Garza bill would establish an informal rule-making procedure to speed the EPA through suspen-

### **Many Pesticide Cancellations**

#### *Manufacturers Are Voluntarily Canceling Use of These Pesticides on Some Crops...*

Anilazine (Dyrene)	Dicofolophos (Bidrin)	Metiram (Polyram)
Atrazine (Antrex)	Disulfoton (Disysion)	Naled (Dibrom)
Azinphos-methyl (Guthion)	Endosulfan (Thiodan)	Nitrapyrin
Benomyl (Benlate)	Ethion	Oryzalin (Surflan)
Captan	Ethephon	Oxydemeton-methyl
Chlorothalonil (Bravo)	Ethyl Parathion	PCNB
Chlorophospham (CIPC)	Fenamiphos (Nemacur)	Phosphimidon
Dacthal (DCPA)	Fenthion	Propargite (Omite/Comite)
Daminozide (Alar)*	Fluometuron	Propham (IPC)
DCNA (Dicloran)	Fonofos (Dyfonate)	Simazine (Pnncep)
Diazinon	Maleic hydrazide (MH-30)	Terbacil (Sinbar)
Dichlobenil (Carson)	Methiocarb	Trichlorfon (Dylox)
Dicofol (Kelthane)	Methyl Parathion	

#### *... And Dropping Use of These Pesticides on All Crops*

Ammonium Sulfamate	Dalapon	Folpet
Carbophenothion	Demeton	Monocrotophos
Chloramben	Dialfor	Nabam
Chlordimethorm	Dioxathion	Propazine
Chlorobenzilate	Diphenamid	Terbutryn
Cycloheximide	Dipropetryn	
Cyhexatin	Fensulfthion	

\*Growth regulator.

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sion or cancellation proceedings. This addresses the need for EPA to have the ability to react quickly once a high-risk pesticide is identified.

Other key elements of the bill include national uniformity for pesticide tolerance levels—that is, superseding more stringent tolerances set by individual states—and increased funding for USDA to collect data on pesticide use, as well as support for integrated pest management (IPM) programs in minor use crops.

Many agricultural producer groups and commodity trade organizations, as well as chemical manufacturer groups, see the benefits consideration as necessary in allowing newer, less toxic substances to pass registration scrutiny now blocked by the Delaney Clause.

However, some consumer and environmental advocates maintain that economic benefits to agriculture should not be included when considering registration of a potentially carcinogenic pesticide for food uses. They say that these bene-

fits, calculated in dollar terms, could be judged to outweigh health risks, which are more difficult to quantify.

### ***Brown Bill (H.R. 3153)***

A third bill, the Pesticide Regulatory Reform Amendments of 1989, is sponsored by Congressman George Brown (D-Cal.). Brown proposes four major changes to current law. The most significant calls for expediting cancellation, regular suspension, and emergency suspension processes for pesticides posing unacceptable risks to humans and the environment.

For cancellation, when a harmful pesticide is identified, EPA could issue a proposed cancellation to the registrant after consultation with USDA, the Department of Health and Human Services, and notification in the *Federal Register* initiating a 60-day public comment period. After

## Policy

these steps, the EPA could propose a final cancellation order.

The process for regular suspension would be similar. However, EPA could begin emergency suspension proceedings without prior notification of the registrant or other federal agencies. Emergency suspension has been used in the past when a pesticide was deemed an imminent hazard, its use posing significant risks to humans.

The most recent pesticide suspension and subsequent cancellation was of dinoseb, a contact herbicide, in 1987. The growth-regulator Alar, on the other hand, was voluntarily pulled from the market by its manufacturer, Uniroyal.

Enactment of this provision of the Brown bill would be acceptable to many consumer and environmental groups that have been concerned with the procedural delays and administrative requirements necessary to remove a harmful pesticide from the market.

The second change in H.R. 3153 over current law would require reregistration of all pesticides every 9 years to assure that they comply with contemporary toxicological and environmental standards.

Third, the bill would provide for the continued use of a suspended pesticide in a state if EPA determined that removing it would cause severe economic dislocation, or that no alternatives were available. Finally, USDA would provide EPA with information annually on current pest problems, including resistance buildup; pest control methods being used; and current research into alternative pest control and management methods.

### President's Plan

Negligible risk is the foundation of the President's plan. For cancellations, the plan provides for EPA to consult with USDA and, where appropriate, with

Yield Losses for Soybeans Would Be Greatest in Southeast

Region	Ban permethrin, fenvalerate, & methomyl	Ban all foliar insecticides
Appalachia	1.5	7.2
Corn Belt	0	.9
Delta	3.2	19.5
Lake States	0	0
Northeast	0	1.2
Southeast	16.4	54.3

Source: USDA, ERS.

HHS; for publication of proposed cancellation orders; for a comment period; and for an informal public hearing.

Suspensions would be appropriate when EPA determined that a pesticide poses an imminent hazard to health or the environment.

Under the plan, the definition of imminent hazard would be significantly changed to give EPA greater flexibility to suspend a pesticide. Then more time would be used to evaluate its risks and benefits.

EPA's enforcement authority would be enhanced. The President's plan also would impose national chemical standards for tolerances that would supersede state standards.

### Economic Consequences For Agriculture

What these proposed changes might mean for farmers depends on what becomes law and how that law is enforced. Specifically, what pesticides would be targeted by the pending legislation is unclear. And the economic consequences would ultimately depend on regional differences in pest infestations and pesticide use.

USDA economists have examined the potential effects of banning pesticides, including soil fumigants, that are cur-

rently under Special Review at EPA, to give a sense of what tighter regulations might mean. EPA Special Reviews are procedures that may lead to banning or restricting the use of a number of pesticides, even under current law.

The research shows that farmers in the Southeastern U.S. would experience a 16-percent drop in soybean yields if the insecticides permethrin, fenvalerate, and methomyl were banned, since the possible alternative products would provide less effective pest control. Soybean yields would fall 54 percent if all foliar insecticides were taken off the market and no effective alternatives were available.

In another USDA study, consumer costs were estimated to increase by \$3.8 billion if soil fumigants could not be used to grow citrus, potatoes, tomatoes, and tobacco. In the short run, average annual consumer prices would rise 53 percent for fresh tomatoes, 11 percent for potatoes, 8 percent for canned tomatoes, and 4 percent for cigarettes.

Some caveats to the conclusions are necessary. The analysis assumes that new producers would not enter the market, current producers would not increase acreage, and imports would not increase. If imports did come in, and new producers step in, the estimated price effects would be muted (see the special article in the June 1989 *Agricultural Outlook*).

Given sufficient development time, less toxic chemical and nonchemical alternatives, including the products of biotechnology and bioengineering processes, could be developed to replace some popular pesticide products. [Phil Szmedra (202) 786-1462] ■



## GATT Talks: No Outcome Yet

**W**hile the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) is scheduled to conclude this December, major differences remain between the participating nations. The negotiating parties agreed in April 1989 on the goal of "substantial progressive reductions in agricultural support and protection...resulting in correcting and preventing restrictions and distortions in world agricultural markets." But, the mechanics of reaching this goal are still up in the air.

The U.S. and the Cairns Group are both proposing strong reforms that would eliminate domestic and trade policies that distort agricultural markets. The Cairns Group is made up of 14 agricultural exporters, including Australia, Brazil, Canada, and New Zealand. But the EC and several others are resisting such sweeping changes.

Since the midterm review concluded last April, a number of major proposals have been submitted. In addition to the U.S., the EC, and the Cairns Group, ideas for comprehensive reform have come from Japan, South Korea, Brazil and Colombia, the Nordic Countries, Switzerland, Austria, and a group called the Net Food Importing Developing Countries.

Most of the proposals address four major areas: (1) import access, (2) export competition, (3) internal support, and (4) food safety and plant and animal health. In addition, many of the proposals deal with giving special and differential treatment to developing countries.

### *Differences Galore*

Among the proposals, differences are rife. Not surprisingly, Japan's proposal focuses mainly on allowing nations to have a goal of domestic food security—defined as being self-sufficient in producing "basic foodstuffs." The proposals of South Korea, Switzerland, and Austria also place strong emphasis on food security.

While Brazil and Colombia are both members of the Cairns Group, they have put forward a separate proposal whose main intent is to address the special needs of developing countries.

On the issue of product coverage, the U.S. is alone in specifically stating that trade liberalization should extend to all agricul-



tural and fisheries products and even other selected items, such as hides and skins, wood, and cotton. The Cairns Group states that coverage needs to be more precisely defined.

At the other extreme, the EC is quite specific and limited in its product definition. Japan and South Korea also seek very limited coverage. The two Asian countries have identical text in their proposals, each stating that only major agricultural products having a specified volume of international trade should be covered.

One of the major problems affecting world agricultural trade has been the wide range of the import barriers that are in place. Despite commonly acknowledging that such barriers are a problem, most nations have steadily built them up.

Tariffs for agricultural products are often much higher than for manufactured products. Even worse is the prevalence of nontariff barriers, which ironically have legitimacy under the current terms of the GATT. GATT Article XI 2(c) permits quantitative restrictions if imports would adversely affect domestic supply control programs—opening a Pandora's Box that has allowed nations to tie up agricultural trade severely.

The U.S. has proposed eliminating Article XI 2(c) and converting all existing nontariff barriers to tariffs (tariffication). To ease the transition, tariff-rate quotas are proposed. All tariffs would be reduced over 10 years, while quotas would be expanded until they no longer restricted trade.

At the end of 10 years, no nontariff barriers would be allowed, and the tariffs would be at either low or zero levels. A special

## Special Article

## How Major Trade Lib Proposals Differ

## United States

- Replace nontariff barriers with tariffs, to be phased out over 10-year period (tariffication).
- Phase out export subsidies over 5-year period.
- Assign domestic policies to three groups: those to be phased out (payments tied to output), those to be disciplined (input, investment subsidies), and those permitted (income support not tied to output, environmental, disaster assistance, research, education).
- Treat less developed countries (LDC's) according to level of development in each.

## European Community

- Reduce support and protection in order to re-establish market-oriented agricultural trading system.
- Tariffication not viable. Border protection converted to fixed and variable components; fixed component reduced to Supply Management Unit level and variable component to fluctuate according to market conditions.
- Flexibility in applying GATT rules to LDC's according to actual level of development.

## Cairns Group

- Prohibit protectionist measures not explicitly provided for in GATT rules (includes variable levies and quantity restraints).
- All tariffs bound at low levels or zero.
- Prohibit new and phase out existing export subsidies.
- Reduce internal support through use of an aggregate measure of support (AMS) where calculable, otherwise through commitments to reductions in support prices and budget expenditures.
- Internal policy categories similar to U.S. proposal.
- Measures in LDC's that encourage development to be exempt.

## Japan

- Emphasizes special nature of agriculture and food security. Insists on countries' right to support certain level of self-sufficiency in "basic foodstuffs."
- Reduce and eliminate export subsidies.
- Domestic support with no (or negligible) trade-distorting effects should be permitted; other policies reduced through commitments based on an AMS.
- Allow LDC's longer time frame to achieve Uruguay Round goals.

## South Korea

- Consider the noneconomic factors affecting the farm sector.
- Continue nontariff barriers due to the variability of agricultural supply and demand.
- Phase out export subsidies except for food aid.
- Continue agricultural subsidies that play a role in providing socio-political stability.
- Supports use of an aggregate measure of support in principle, but proposes extensive modifications.

## Brazil and Colombia

- Ensure more favorable treatment of developing countries.
- Accept tariffication but argue for longer time-frames for developing countries.
- Outlaw export subsidies "from the very beginning [of the transition process]."
- Continue those internal support policies that foster development of infrastructure.

## Nordic Group

- Support gradual change in level and form of border protection.
- Tariffication among feasible alternatives.
- Objective needs of individual LDC's must be considered.

## Food Importing Group

- Negotiators should consider interests and problems of importers.
- Continue special treatment of LDC's, and food aid.
- Stricter discipline applied to export subsidies.



safeguard mechanism would also be used to protect against import surges.

The Cairns Group too would replace nontariff barriers with tariffs, which would be reduced over an unspecified period. However, other major players have not shown the same willingness to accept reform of import barriers.

Specifically, the EC has fought tariffication. While the Community may accept a modified form of it, some there have suggested that the price of this acceptance might be "rebalancing"—an adjustment in the existing levels of protection.

In particular, the EC proposes that it boost tariff rates on oilseeds and nongrain feedstuffs, and cut barriers on grains. Both the U.S. and Cairns Group are unwilling to go along with any proposal that would increase protectionism. As a tactical rejoinder, politicians in the EC have claimed that the U.S. Administration's "flexibility" proposal for the next farm bill is a form of rebalancing.

The U.S. Administration has said that any farm bill passed this year would have to be revisited next year to mesh farm supports with the new GATT accord. But, Congress would first have to ratify the GATT agreement.

Unlike the EC's "rebalancing," Japan's proposal openly argues to keep Article XI 2(c). In addition, the South Korean proposal and the proposal made jointly by Brazil and Colombia both suggest keeping exceptions for developing countries.

### *Divisive Export Subsidies*

In the previous GATT round, the Tokyo Round, concluded in 1979, negotiating nations agreed that agricultural export subsidies should be subject to GATT disciplines. But soon after the talks concluded, the EC increased its use of agricultural export subsidies, and the disciplines proved ineffective. Other countries, including the U.S., then came out with their own export subsidies.

The current proposals by both the U.S. and the Cairns Group would end export subsidies. The U.S. proposes that they be phased out over 5 years. While the Cairns Group does not specify a time frame, it does state that subsidies would be frozen at existing levels and then would be phased out using "an agreed timetable and formula."

Export subsidies are viewed differently by most of the other GATT contracting parties. Japan, for example, has no agricultural export subsidies. But, in order to help protect its farmers, Japan proposes that other nations' export subsidies be cut and eventually eliminated. In contrast, South Korea expresses con-

cern that food aid to developing countries could be adversely affected. Yet, all of the proposals to eliminate export subsidies allow for bona fide food aid.

### *Linking Domestic Subsidies*

On the issue of domestic programs, the impetus to reform again comes from the U.S. and the Cairns Group. The U.S. has firmly stated that agricultural subsidies per se are not the problem, only those subsidies that distort trade. Accordingly, the U.S. proposal is to divide domestic subsidies into three categories.

Those that are most trade-distorting would be phased out over 10 years (so-called red-light policies), while those that create minimal distortions would be permitted to continue (green-light policies). Other policies (yellow-light policies) would be subjected to new GATT disciplines and would be reduced via an aggregate measure of support that weighs both commitments and the reductions taken under those commitments.

The Cairns Group also favors progressive reduction of the most trade-distorting domestic support policies, with its proposal calling for a wide range of actions, including reductions in producer support prices and budget expenditures.

The EC again takes a different tack, however, with a proposal to reduce support on the basis of Support Measurement Units (SMU's). To remove the effect of fluctuations in exchange rates and market prices, SMU's would be based on fixed reference prices. So, the SMU's would be relatively unresponsive to changes in world agricultural markets. It is also unclear how far reductions would be taken in SMU's; the EC is similarly vague with respect to program and commodity coverage.

Japan argues that those domestic subsidies that "play an essential role in meeting the multiple needs of agricultural policy, such as land preservation and environmental conservation, and sustenance of regional community," should be permitted.

South Korea similarly mentions the importance of "sociopolitical stability" in considering reductions in support. The proposal offered by Brazil and Colombia expresses the concern shared by many developing countries that internal support policies that aid the development of infrastructure should not be reduced.

### *Some Agreement on Food Safety*

The arena of food safety and plant and animal health features the least amount of dissension among the major negotiating nations.

Food safety measures often have been used as implicit barriers to keep out imports that compete with domestically produced products. Accordingly, most of the GATT negotiators would seek to harmonize international standards and settle disputes

## Special Article

between nations using already existing international organizations, such as the Codex Alimentarius Commission, the International Office of Epizootics, or the International Plant Protection Convention.

Generally, this is the one area of the negotiations where the U.S., the Cairns Group, the EC, and several other nations agree. There are important exceptions, however. In particular, the proposal by Japan calls for "allowances...for differences in sanitary conditions, geographical conditions, and dietary customs...from country to country." The South Korean proposal expresses similar concerns.

Other GATT participants see Japan and South Korea as unwilling to give up existing sanitary and phytosanitary measures because they are implicit trade barriers. The proposal by Brazil and Colombia, on the other hand, expresses the need for extra time and technical assistance that many developing countries will need in harmonizing their regulations and bringing their products into line.

In this arena, some intra-EC complications exist as well. As the Europe 1992 movement progresses, there are indications that EC member countries are likely to negotiate standards among themselves that differ from international standards. This approach could distort world trade patterns and cut U.S. agricultural exports (see the special article in the December 1989 *Agricultural Outlook*).

### LDC Exceptions

In its proposal, the U.S. recognizes that less developed countries (LDC's) need to retain some tariffs as well as continue some subsidies that foster long-term development. So, the U.S. proposal suggests linking the degree of special treatment to a country's level of economic development. But, the U.S. opposes any permanent exceptions to GATT disciplines for LDC's. The Cairns Group, the EC, and Japan also see the need for special treatment of LDC's.

In essence, though, the lack of disagreement in this particular area probably stems from the lack of specifics in the proposals. Even the proposal from Brazil and Colombia is fairly general.

The use of an aggregate measure of support (AMS) in the negotiations is another critical issue. An AMS measures the total amount of support that agricultural producers or consumers of a particular country receive. If GATT decides to use an AMS, the focus will shift to what kind and how it will be used.

The U.S. has suggested that the producer-subsidy equivalent is one possibility, but it should be confined to yellow-light policies. The Cairns Group has suggested the trade distorting equivalent, while the EC has proposed the SMU. The choice is important, because how the degree of support is estimated and used will govern how much liberalization takes place.

### Other Proposals

The Nordic Countries' proposal suggests moving "towards policies that are less trade distorting than those presently employed" while at the same time honoring "clearly defined national policy objectives such as...food security, and regional, social, as well as environmental objectives consistent with the objectives of these negotiations."

The Nordic Countries' proposal shows a willingness to reduce domestic support and work toward eliminating most export subsidies. It also argues for the usefulness of an AMS. And tariffication—with some form of stabilizers or safeguards—is explicitly accepted as a "feasible alternative."

The Swiss and Austrian proposals are quite similar to the Japanese, stressing food security and other noncommercial objectives.

The Net Food Importing Developing Countries' proposal, prepared by Egypt, Jamaica, Mexico, Morocco, and Peru, is supported by other developing countries. It states that these nations regard themselves as net losers in the trade reform process, mainly because of the higher international trading prices that are expected to result (see the *Agricultural Economy* department).

The importers' proposal emphasizes treatment fostering food aid and makes a strong case for developed nations to give technical assistance to less developed nations to "enhance the capacity to increase agricultural productivity and production."

### Why the Differences?

The differences behind the numerous GATT proposals stem not just from the differences in existing economic systems and current fortunes of the negotiating countries. They also come from fundamental differences in socioeconomic philosophies. This is especially true for the U.S., EC, and Japan. The U.S. has long been much more market oriented and so has been a strong advocate for free trade.

On the other hand, the countries in the European Community have a history of cartels and managed trade that goes back long before the EC was founded. There, a free market is sometimes viewed as a threat more than an opportunity. Even within the EC, though, there are wide ranges of economic philosophies; some countries like the Netherlands have been free trade advocates for centuries.



No country has benefited more than Japan from the more open world trading system that has been fostered under GATT during the postwar era. However, Japan's economic success has come within the context of a modern state where the Confucian virtue of harmonious relations between businesses and workers is often promoted at the expense of consumers.

Consequently, Japan continues to resist opening up markets in a way that would threaten the existing harmonies. Moreover, Japan has a long history of domestic food crises that drives its desire to maintain its producers, regardless of cost.

With all of the differences that exist in basic economic and social philosophies around the world, it would seem almost impossible to come to a global consensus about the changes that are necessary to open up world trade in agriculture. This is why the example of the Cairns Group is especially important in offering some hope.

The Cairns Group is a diverse collection of countries, ranging from Canada to Hungary to the Philippines. These countries, however, have come to realize that the costs of continued high levels of protection and domestic support are considerably greater than the benefits. They have put most of their philosophical differences aside to argue for liberalizing world trade policies.

### *Outlook Clouded*

Although the Uruguay Round negotiations are formally slated to run through December, most of the differences need to be ironed out before the end of this summer.

An informal meeting of the key agricultural negotiators was held last month and is being followed by a regularly scheduled meeting this month. Some observers believe that many of the remaining differences could start being worked out at these meetings. If so, a draft agreement could begin to be crafted this summer. *[Larry Deaton, Matt Shane, and Diana Wood (202) 786-1610]* ■

## Mandatory Seafood Inspection In the Offing?



One of the chief issues facing the aquaculture industry today is possible mandatory inspection of all seafood products, from both fish farms and the capture industry. There is broad-based support for mandatory federal seafood inspection in Congress.

The major issue seems to be not whether there should be a mandatory inspection program, but what government agency will be put in charge of it and what form it should take.

In part because many consumers believe that eating seafood leads to better health, seafood consumption has grown markedly in the 1980's. But, unlike red meat and poultry, seafood is not now covered by a comprehensive mandatory federal inspection program.

Moreover, reports of toxic and medical wastes being dumped in the ocean, toxic chemical discharges in rivers and streams, and numerous oil spills have given impetus to the calls for mandatory seafood inspection. After incidents of marine or freshwater pollution, a major concern of the seafood industry has been to find ways to restore consumer confidence in the safety of seafood. One response would be to make seafood inspection mandatory.

## Special Article

### *What is the Hazard Analysis and Critical Control Point System (HACCP)?*

HACCP is a process control system which emphasizes the prevention of problems rather than spotting already contaminated or adulterated products. It includes identifying "critical control points" where contamination may occur. HACCP puts increased emphasis on testing at critical control points, and less emphasis on testing the final product.

HACCP relies heavily on monitoring, documenting, verifying, and record keeping to control the food production process. Records needed at critical control points could include the products' internal temperature, oven temperature, and duration of the heating process for a cooked ready-to-eat product.

The HACCP system would require food processors to perform specific monitoring tasks. Under a continuous inspection system, such as for meat and poultry, the inspector and the company would both be monitoring and testing at critical control points. Under noncontinuous systems, the inspector would rely on plant records, product sampling, and testing. Verification would continue to be an important regulatory tool.

Since the method for processing various seafood products differs considerably, separate HACCP plans would have to be established for various types of seafood products and would be tailored to particular plants.

Plans are currently being developed for HACCP implementation in fish products by the NMFS and for meat and poultry by USDA's Food Safety and Inspection Service.

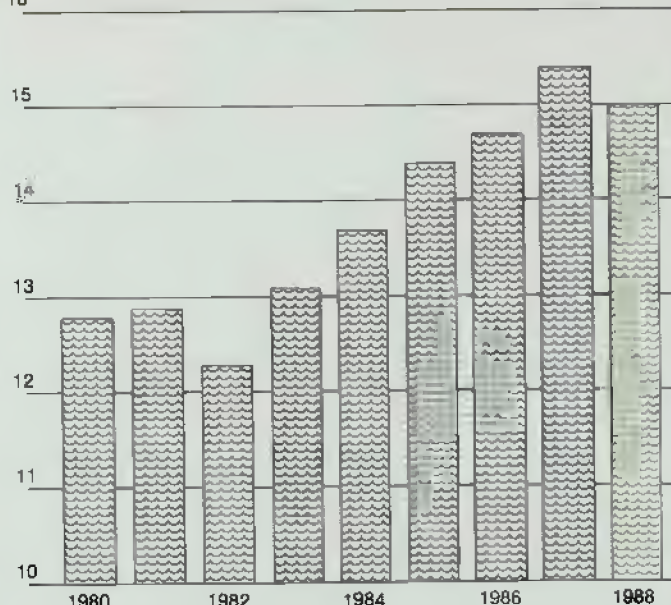
### *Multi-Agency Responsibility*

In the bills now before Congress, three agencies have been proposed to take the lead on inspection. Some bills name USDA to have overall responsibility for seafood because it already inspects red meats and poultry. The National Marine Fisheries Service (NMFS) also has been proposed as the lead agency because it already runs a voluntary inspection program for seafood processors willing to pay for the service. Finally, the Food and Drug Administration (FDA), because of its role in guarding the safety of the nation's food supply other than red meat and poultry, is being considered.

Some bills have split the responsibility for the inspection program between two or more agencies. One proposal calls for

U.S. Seafood Consumption Stands at 15 Pounds a Person

Pounds  
16  
15  
14  
13  
12  
11  
10



USDA to do the inspections at processing plants, but for the FDA to set the standards for any tests used, and for the NMFS to do the inspections of fishing vessels.

The second major question concerns the type of inspection process to be used in the program. Some bills propose to adapt red meat and poultry inspection programs to seafood. The alternative would be to use the Hazard Analysis and Critical Control Point (HACCP) method, and this system is the one called for in the majority of the bills (see the accompanying box).

By and large, the current food inspection programs are funded primarily out of general government revenues. However, for red meat and poultry inspections, the costs of inspectors' overtime wages are borne by the processing firms.

A different funding method would be for user fees to cover all the costs, and for firms to be charged for their share. But this could jeopardize small seafood processing plants that have low profit margins or are open on an irregular basis.

Funding the inspection program from general tax revenues seems to have the backing of most of the parties involved in the debate, but there is always the possibility that a user fee would appeal to legislators faced with increasing budget demands.

Another major question is what type of tests will be included in the program. Most bills before Congress call for an expansion of the tests now performed on some seafood products. Testing would be done for such contaminants as pesticides and heavy metals.



Most of the bills do not attempt to list all the contaminants that should be tested for, but instead cover them by such phrases as "any poisonous or deleterious substance which may render [the product] injurious to human health." In most cases, the specific substances to be tested for would be named later, either when the detailed rules and regulations that would accompany an inspection bill were drawn up or when the HACCP plans for that class of products were drawn up.

### *De la Garza Bill*

A federal inspection bill (H.R. 3508) sponsored by Rep. E. (Kika) de la Garza (D-Tex.), Rep. Walter B. Jones (D-N.C.), and others would rely heavily on USDA.

It would expand USDA's power to inspect fresh and marine fish, shellfish, and aquatic plants used as food. The exact nature of the inspections and their frequency would be left up to what is deemed necessary. The inspections would use the HACCP method.

Other key points in the de la Garza bill include the following:

- all establishments or vessels that process seafood would have to be registered with USDA;
- all labeling on processed products would have to be cleared with USDA;
- all products from registered establishments would bear the establishment's registration number and the official mark of the inspection program;
- all registered establishments would be required to keep records of "the receipt, delivery, sale, movement, or disposition of all its products";
- inspectors would have the power to enter any registered establishment or vessel at any time;
- in cooperation with the Department of Commerce, a comprehensive system would be established to monitor the quality of seafood coming from designated production areas;
- USDA would give grants of 50 percent of the costs of monitoring production areas to each state performing that function, and states would be encouraged to set up seafood inspection programs with standards at least equal to the federal ones;

- the process would be extended to all imported seafood products through the use of random inspections and sampling. USDA could issue a certificate to foreign countries maintaining an inspection program comparable to the one set up in the U.S.

The Secretary of Agriculture would be given the authority to establish regulations for the following items: processing practices in plants and on vessels; wholesomeness, packaging, and labeling; procedures for inspections; and standards for monitoring and classifying seafood production areas.

### *Glickman Bill*

Another of the inspection bills before Congress (H.R. 3481) was introduced by Rep. Dan Glickman (D-Kan.) and others; it would split the responsibility for mandatory inspection between USDA and the Department of Health and Human Services (HHS). The Secretary of Agriculture would be in charge of the inspection program, but the Secretary of HHS would determine what substances to test for and at what tolerance levels.

This determination would be based on findings of a report prepared by the National Academy of Sciences. The report would detail what chemicals, bacteria, viruses, and toxins might be included in the inspection program.

In the Glickman bill, the Secretary of HHS would establish the standards for the hazardous substances, probably through the work of the FDA. One other split of responsibility is that the Secretary of Commerce would be charged with identifying those shellfish growing areas that might be producing contaminated products.

The Secretary of Agriculture under this bill would:

- set standards for sanitation in the processing, storage, and handling of seafood products;
- see that each processing plant or vessel had a certificate showing it was following the guidelines of the program;
- see to the inspection of all processing establishments or vessels involved in interstate commerce. The inspection would cover sanitation in processing and storage and also gathering samples for test usage;
- determine that all labeling and packaging of seafood products were not false or misleading;
- monitor seafood imports to ensure their safety;
- establish priorities for seafood safety research; and
- implement a national program for seafood safety education.

An important difference between the Glickman bill and the one sponsored by Rep. de la Garza is that the former places a specific price tag on the activities it would mandate. Glickman's

## Special Article

bill includes appropriations of \$75 million for each of the 1990-93 fiscal years.

### *Debate Over Details*

There is a good chance that some form of a mandatory seafood inspection bill will eventually be passed, even though specific regulations are still under debate.

A bill comprehensive enough to convince consumers of seafood's safety may benefit the seafood industry by increasing

consumption. But the extent of any gain in consumption would be determined by whether retail prices rise—that is, how much of the cost increase brought on by mandatory inspection is passed on to consumers.

Some firms may not be able to finance the changes needed to comply with the new regulations. In the aquaculture industry, many smaller growers who process only a small amount of their production may leave that part of their business entirely, while processing firms may want to expand their operations to distribute any added fixed costs over more output. *[David J. Harvey (202) 786-1888]* ■



# Statistical Indicators

## Summary Data

Table 1.—Key Statistical Indicators of the Food & Fiber Sector

	1989				1990				
	II	III	IV	Annual	I F	II F	III F	IV F	Annual F
Prices received by farmers (1977=100)	148	145	147	148	151	142	139	136	142
Livestock & products	156	159	166	160	168	158	156	153	159
Crops	141	130	126	135	134	126	122	117	125
Prices paid by farmers, (1977=100)									
Production items	166	166	165	165	168	—	—	—	166
Commodities & services, interest, taxes, & wages	177	178	178	177	180	—	—	—	180
Cash receipts (\$ bil.) 1/	160	164	151	158	170	169	168	146	160-166
Livestock (\$ bil.)	81	82	88	83	93	82	80	80	83-85
Crops (\$ bil.)	79	83	65	74	76	87	87	66	78-82
Market basket (1982-84=100)									
Retail cost	124	125	127	125	—	—	—	—	—
Farm value	108	107	108	107	—	—	—	—	—
Spread	133	135	137	134	—	—	—	—	—
Farm value/retail cost (%)	30	30	30	30	—	—	—	—	—
Retail prices (1982-84=100)									
Food	125	126	127	125	—	—	—	—	—
At home	124	125	126	124	—	—	—	—	—
Away from home	127	128	130	127	—	—	—	—	—
Agricultural exports (\$ bil.) 2/	9.8	8.8	10.6	39.7	10.3	8.8	8.8	—	38.5
Agricultural imports (\$ bil.) 2/	5.5	5.0	5.4	21.5	5.9	5.4	4.8	—	21.5
Commercial production									
Red meat (mil. lb.)	9,870	9,847	10,108	39,417	9,600	9,837	9,915	10,148	39,500
Poultry (mil. lb.)	5,539	5,704	5,726	22,038	5,555	5,940	6,020	6,005	23,520
Eggs (mil. doz.)	1,394	1,389	1,414	5,586	1,390	1,410	1,420	1,470	5,690
Milk (bil. lb.)	37.7	35.2	34.9	144.3	36.6	38.6	36.2	35.5	146.9
Consumption, per capita									
Red meat and poultry (lb.)	54.6	55.3	57.6	220.5	53.7	55.2	55.9	58.2	223.1
Corn beginning stocks (mil. bu.) 3/	5,203.9	3,419.0	1,930.0	4,259.1	7,079.1	4,856.5	—	—	1,930.4
Corn use (mil. bu.) 3/	1,785.8	1,489.3	2,378.1	7,260.2	2,223.0	—	—	—	—
Prices 4/									
Choice steers—Omaha (\$/cwt)	73.85	70.09	72.46	72.52	76-77	68-74	68-74	71-77	70-76
Barrows & gilts—7 mths. (\$/cwt)	41.84	46.07	47.42	44.03	48-49	50-56	49-55	43-49	47-53
Broilers—12-city (cts/lb.)	67.1	59.7	49.8	59.0	55-56	52-58	49-55	46-52	51-57
Eggs—NY gr. A large (cts/doz.)	75.2	81.5	92.6	81.9	87-88	74-80	62-68	59-65	70-76
Milk—all at plant (\$/cwt)	12.27	13.27	15.43	13.51	14.25-14.75	10.90-11.90	10.90-11.90	11.60-12.60	11.85-12.85
Wheat—KC HRW ordinary (\$/bu.)	4.44	4.31	4.34	4.35	—	—	—	—	—
Corn—Chicago (\$/bu.)	2.76	2.49	2.36	2.55	—	—	—	—	—
Soybeans—Chicago (\$/bu.)	7.39	6.71	5.70	6.70	—	—	—	—	—
Cotton—Avg. spot mkt. (cts/lb.)	63.1	68.6	67.1	63.74	—	—	—	—	—
	1982	1983	1984	1985	1986	1987	1988	1989	1990 F
Gross cash income (\$ bil.)	150.6	150.4	155.3	156.9	152.5	162.0	171.6	174	176-182
Gross cash expenses (\$ bil.)	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121-123
Net cash income (\$ bil.)	37.8	36.9	38.7	46.7	51.8	54.5	57.2	53	54-58
Net farm income (\$ bil.)	23.5	12.7	32.2	32.4	38.0	43.6	42.7	49	45-49
Farm real estate values 5/									
Nominal (\$ per acre)	823	768	601	713	640	599	632	667	705-720
Real (1977 \$)	513	472	459	395	346	317	322	325	328-334

1/ Quarterly data seasonally adjusted at annual rates. 2/ Annual data based on Oct.-Sept. fiscal years ending with year indicated. 3/ Dec.-Feb. first quarter; Mar.-May second quarter, June-Aug. third quarter, Sept.-Nov. fourth quarter, Sept.-Aug. annual. Use includes exports & domestic disappearance. 4/ Simple averages. 5/ 1981 & 1986-89 values as of February 1. 1982-85 values as of April 1. F = forecast, — = not available.

## U.S. and Foreign Economic Data

Table 2.—U.S. Gross National Product &amp; Related Data

	Annual			1988		1989			
	1987	1988	1989 R	IV	I	II	III	IV R	
\$ billion (quarterly data seasonally adjusted at annual rates)									
Gross national product	4,524.3	4,880.6	5,233.3	5,017.3	5,113.1	5,201.7	5,281.0	5,337.6	
Personal consumption expenditures	3,010.8	3,235.1	3,470.8	3,324.0	3,381.4	3,444.1	3,508.1	3,549.3	
Durable goods	421.0	455.2	473.1	467.4	468.4	471.0	480.1	480.1	
Nondurable goods	998.1	1,052.3	1,123.5	1,078.4	1,098.3	1,121.5	1,131.4	1,142.8	
Clothing & shoes	177.2	188.8	200.1	193.9	195.0	198.9	202.2	204.3	
Food & beverages	529.2	559.7	594.9	574.1	587.3	592.2	598.1	601.8	
Services	1,501.7	1,727.6	1,874.1	1,778.2	1,816.7	1,851.7	1,890.6	1,937.4	
Gross private domestic investment	699.9	750.3	774.3	752.8	769.6	775.0	779.1	773.6	
Fixed investment	670.6	719.6	748.3	734.1	742.0	747.6	751.7	744.0	
Change in business inventories	29.3	30.6	26.0	18.7	27.7	27.4	27.4	29.5	
Net exports of goods & services	-112.6	-73.7	-47.7	-70.8	-54.0	-50.6	-45.1	-41.2	
Government purchases of goods & services	926.1	968.9	1,036.0	1,011.4	1,016.0	1,033.2	1,038.9	1,056.0	
1982 \$ billion (quarterly data seasonally adjusted at annual rates)									
Gross national product	3,853.7	4,024.4	4,143.7	4,069.4	4,106.8	4,132.5	4,162.9	4,172.4	
Personal consumption expenditures	2,513.7	2,598.4	2,669.4	2,627.7	2,641.0	2,653.7	2,690.1	2,692.6	
Durable goods	389.6	413.6	425.2	420.5	419.3	424.9	436.4	420.0	
Nondurable goods	890.4	904.5	916.8	912.0	915.0	908.7	920.8	921.6	
Clothing & shoes	159.6	161.3	168.9	164.6	165.0	165.8	173.3	171.5	
Food & beverages	452.7	460.0	482.8	462.1	468.0	461.4	483.2	480.5	
Services	1,233.7	1,280.2	1,327.4	1,295.2	1,308.7	1,319.0	1,332.9	1,351.1	
Gross private domestic investment	674.0	715.8	721.4	709.1	721.1	719.8	724.6	720.0	
Fixed investment	650.3	687.9	698.5	690.8	696.6	700.7	702.7	693.9	
Change in business inventories	23.7	27.9	22.9	18.3	24.5	19.1	21.9	26.2	
Net exports of goods & services	-115.7	-74.9	-52.9	-73.8	-55.0	-51.2	-57.1	-68.2	
Government purchases of goods & services	781.8	785.1	805.8	806.4	799.7	810.3	805.3	807.9	
GNP implicit price deflator (% change)	3.2	3.3	4.1	4.7	4.0	4.6	3.2	3.2	
Disposable personal income (\$ bil.)	3,205.9	3,477.8	3,779.4	3,587.4	3,689.5	3,747.7	3,806.8	3,873.4	
Disposable per. income (1982 \$ bil.)	2,676.6	2,793.2	2,906.7	2,835.9	2,881.7	2,887.6	2,919.2	2,938.5	
Per capita disposable per. income (\$)	13,140	14,116	15,189	14,504	14,884	15,084	15,280	15,504	
Per capita dis. per. income (1982 \$)	10,970	11,337	11,682	11,486	11,625	11,622	11,717	11,782	
U.S. population, total, incl. military abroad (mil.)	243.9	246.4	248.8	247.3	247.9	248.5	249.1	249.8	
Civilian population (mil.)	241.7	244.1	246.6	245.1	245.7	246.2	246.9	247.4	
	Annual			1989				1990	
	1987	1988	1989 P	Jan	Oct	Nov	Dec	Jan P	
Industrial production (1977=100)	129.8	137.2	141.8	140.8	141.8	142.2	142.5	140.9	
Leading economic indicators (1982=100)	140.1	142.8	144.9	146.0	144.4	144.5	145.3	145.3	
Civilian employment (mil. persons)	112.4	115.0	117.3	116.6	117.6	117.8	117.9	117.9	
Civilian unemployment rate (%)	6.1	5.4	5.2	5.3	5.2	5.3	5.3	5.2	
Personal income (\$ bil. annual rate)	3,777.6	4,064.5	4,427.9	4,273.1	4,501.8	4,543.9	4,566.6	4,602.5	
Money stock-M2 (daily av.) (\$ bil.) 1/	2,909.9	3,072.4	3,221.7	3,073.6	3,181.5	3,200.8	3,221.7	3,232.0	
Three-month Treasury bill rate (%)	5.82	6.69	8.12	8.29	7.63	7.65	7.64	7.64	
AAA corporate bond yield (Moody's) (%)	9.38	9.71	9.26	9.62	8.92	8.89	8.86	8.99	
Housing starts (1,000) 2/	1,621	1,488	1,374	1,659	1,423	1,347	1,254	1,626	
Auto sales at retail, total (mil.)	10.3	10.6	9.9	9.9	8.8	8.5	8.9	10.2	
Business inventory/sales ratio	1.51	1.50	1.51	1.48	1.53	1.53	1.52	—	
Sales of all retail stores (\$ bil.)	152.1	162.9	171.1	140.0	143.4	144.1	144.1 P	146.4	
Nondurable goods stores (\$ bil.)	94.9	100.1	106.2	88.4	89.4	90.3	91.1 P	91.4	
Food stores (\$ bil.)	31.5	33.2	35.5	28.9	30.0	30.2	30.3 P	30.2	
Eating & drinking places (\$ bil.)	14.8	15.8	16.5	13.7	13.8	13.9	13.7 P	13.9	
Apparel & accessory stores (\$ bil.)	7.8	8.2	8.8	7.2	7.4	7.5	7.4 P	7.4	

1/ Annual data as of December of the year listed. 2/ Private, including farm. P = preliminary. R = revised. — = not available.

Information contact: Ann Duncan (202) 786-3313.



Table 3.—Foreign Economic Growth, Inflation, &amp; Export Earnings

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P	1990 F	1991 F	Average 1980-89
Annual percent change												
World, less U.S.												
Real GDP	1.5	0.8	2.0	4.5	3.8	3.0	3.8	3.8	2.9	2.4	2.9	2.8
Consumer prices	15.0	13.7	14.3	11.8	11.3	8.0	10.0	14.7	20.5	17.9	8.7	13.5
Merch. exports	-2.7	-6.7	-2.7	5.1	1.9	10.9	18.5	13.4	8.3	10.4	9.9	6.8
Developed less U.S.												
Real GDP	1.2	0.2	2.2	4.6	3.5	2.7	3.4	3.9	3.8	2.7	3.2	2.7
Consumer prices	10.0	7.8	5.6	4.7	4.2	2.5	2.8	3.1	4.1	4.1	4.2	5.6
Merch. exports	-3.2	-4.4	-0.5	6.9	4.6	19.5	17.7	12.5	6.7	11.6	10.2	7.7
Developing												
Real GDP	2.0	1.8	1.5	4.0	3.8	3.7	4.5	5.7	3.5	3.7	4.7	3.5
Consumer prices	28.4	30.0	39.5	35.1	35.3	26.6	35.3	58.3	57.4	49.8	19.0	37.4
Merch. exports	-1.8	-10.4	-6.5	2.9	-3.1	-6.1	20.7	15.6	13.6	8.4	10.6	5.0
Asia, incl. China												
Real GDP	6.1	5.5	7.7	7.3	7.0	6.1	7.0	9.2	6.3	8.0	6.2	6.8
Consumer prices	9.3	5.8	6.2	6.7	7.2	5.6	7.4	11.6	9.9	8.2	10.4	8.2
Merch. exports	7.6	-0.5	4.6	14.6	-0.9	9.4	29.4	23.1	13.3	9.9	12.6	12.8
Latin America												
Real GDP	-0.4	-1.5	-2.6	3.3	3.4	3.6	3.1	1.0	1.1	1.4	2.9	1.7
Consumer prices	60.1	73.6	118.9	116.5	127.7	82.4	116.2	212.3	340.4	304.3	81.2	130.3
Merch. exports	6.5	-10.6	-1.0	6.7	-7.5	-14.6	9.0	16.9	10.2	6.8	7.5	4.6
Africa												
Real GDP	-1.9	0.6	0.0	-0.3	3.9	1.0	1.3	2.2	2.4	2.6	2.3	1.6
Consumer prices	23.4	14.1	19.7	19.1	11.9	12.1	12.6	18.4	16.6	14.6	13.1	16.2
Merch. exports	-19.7	-9.1	-8.0	3.4	1.0	-22.1	18.6	-3.7	15.3	4.8	7.6	1.0
Middle East												
Real GDP	2.7	3.7	0.5	1.0	-1.8	2.0	1.5	1.4	6.0	4.4	4.7	1.7
Consumer prices	16.8	14.0	14.5	19.6	13.8	11.7	12.9	19.6	21.4	18.0	17.8	16.2
Merch. exports	-3.8	-21.1	-22.2	-10.5	-6.8	-19.2	16.0	0.9	29.4	6.6	8.5	-1.5
Eastern Europe, incl. USSR												
Real GDP	—	—	—	—	—	—	1.1	1.8	0.3	-0.4	0.1	1.1
Consumer prices	—	—	—	—	—	—	—	32.9	257.0	144.2	27.1	145.0
Merch. exports	—	—	—	—	-8.1	-3.2	12.8	3.5	2.2	6.5	4.6	1.4

P = preliminary. F = forecast. — = not available.

Information contact: Alberto Jaramo, (202) 786-1705.

## Farm Prices

Table 4.—Indexes of Prices Received &amp; Paid by Farmers, U.S. Average

	Annual			1989					1990	
	1987	1988	1989	Feb	Sept	Oct	Nov	Dec	Jan R	Feb P
1977=100										
Prices received										
All farm products	127	138	146	149	144	145	147	149	154	153
All crops	106	126	135	139	126	128	128	127	136	135
Food grains	103	138	156	161	151	152	150	153	151	145
Feed grains & hay	85	120	128	136	120	118	118	119	120	118
Feed grains	81	117	123	132	114	112	113	114	115	112
Cotton	99	85	98	87	106	109	108	102	99	102
Tobacco	129	133	144	143	148	146	144	144	144	144
Oil-bearing crops	79	108	102	112	89	87	89	90	91	89
Fruit, all	182	184	190	185	199	208	208	182	166	173
Fresh market 1/	196	196	200	195	210	221	219	188	169	177
Commercial vegetables	148	144	156	171	133	143	139	149	253	255
Fresh market	147	137	146	161	121	132	128	134	242	238
Potatoes & dry beans	126	124	167	171	137	136	166	178	184	182
Livestock & products	146	150	160	156	160	162	165	170	172	171
Meat animals	163	168	174	178	172	174	175	180	185	188
Dairy products	129	126	139	135	144	151	160	166	162	153
Poultry & eggs	107	118	138	128	139	129	134	136	139	131
Prices paid										
Commodities & services, interest, taxes, & wage rates	162	169	177	—	—	178	—	—	180	—
Production items	147	157	165	—	—	165	—	—	168	—
Feed	103	128	135	—	—	128	—	—	128	—
Feeder livestock	179	192	194	—	—	196	—	—	205	—
Seed	148	150	165	—	—	170	—	—	170	—
Fertilizer	118	130	137	—	—	131	—	—	131	—
Agricultural chemicals	124	126	132	—	—	134	—	—	134	—
Fuels & energy	161	163	180	—	—	183	—	—	200	—
Farm & motor supplies	145	148	155	—	—	155	—	—	156	—
Autos & trucks	208	215	223	—	—	225	—	—	225	—
Tractors & self-propelled machinery	174	181	193	—	—	199	—	—	199	—
Other machinery	185	197	208	—	—	210	—	—	210	—
Building & fencing	137	138	141	—	—	143	—	—	143	—
Farm services & cash rent	146	147	158	—	—	158	—	—	163	—
Int. payable per acre on farm real estate debt	189	182	177	—	—	177	—	—	178	—
Taxes payable per acre on farm real estate	144	148	152	—	—	152	—	—	156	—
Wage rates (seasonally adjusted)	166	171	185	—	—	179	—	—	179	—
Production items, interest, taxes, & wage rates	151	160	167	—	—	166	—	—	169	—
Ratio, prices received to prices paid (%) 2/	79	82	84	85	81	81	83	84	86	85
Prices received (1910=100)	578	632	674	681	656	662	672	681	705	700
Prices paid, etc. (parity index) (1910=100)	1,111	1,165	1,220	—	—	1,224	—	—	1,241	—
Parity ratio (1910=100) (%) 2/	52	54	55	56	53	54	55	56	56	—

1/ Fresh market for noncitrus; fresh market & processing for citrus. 2/ Ratio of index of prices received for all farm products to index of prices paid for commodities & services, interest, taxes, & wage rates. Ratio uses the most recent prices paid index. Prices paid data are quarterly & will be published in January, April, July, & October. P = preliminary. R = revised. — = not available.

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Table 5.—Prices Received by Farmers, U.S. Average

	Annual 1/			1989					1990	
	1987	1988	1989 P	Feb	Sept	Oct	Nov	Dec	Jan R	Feb P
<b>Crops</b>										
All wheat (\$/bu.)	2.57	3.72	3.80-3.90	4.03	3.72	3.75	3.71	3.80	3.71	3.57
Rice, rough (\$/cwt)	7.27	8.83	7.00-8.00	8.87	7.55	7.54	8.84	8.95	7.40	7.29
Corn (\$/bu.)	1.94	2.54	2.20-2.40	2.59	2.27	2.22	2.24	2.27	2.31	2.27
Sorghum (\$/cwt)	3.04	4.05	3.57-3.93	4.05	3.80	3.81	3.68	3.53	3.58	3.58
All hay, baled (\$/ton)	84.78	88.74	—	91.80	84.80	85.70	83.80	84.20	85.00	85.80
Soybeans (\$/bu.)	5.88	7.42	5.35-5.85	7.41	5.70	5.28	5.84	5.84	5.85	5.51
Cotton, upland (cts./lb.)	64.3	58.8	5/ 67.3	52.8	63.8	64.1	65.8	61.4	59.8	61.7
Potatoes (\$/cwt)	4.38	8.02	8.85	8.43	5.82	4.97	8.55	7.02	7.15	8.94
Lettuce (\$/cwt)	14.70	14.70	13.80	12.40	12.80	14.50	13.30	7.08	10.30	8.85
Tomatoes fresh (\$/cwt)	28.00	28.90	31.80	45.20	23.10	29.00	28.20	40.30	118.00	122.00
Onions (\$/cwt)	12.50	9.72	10.70	11.00	9.55	11.40	11.30	12.40	11.60	12.10
Dry edible beans (\$/cwt)	18.50	28.80	27.90	31.20	25.00	25.40	27.70	27.80	30.00	32.10
Apples for fresh use (cts./lb.)	12.7	17.4	—	18.0	19.1	15.9	13.4	12.2	12.5	13.0
Pears for fresh use (\$/ton)	227.00	358.00	380.00	382.00	382.00	387.00	389.0	351.00	349.00	389.00
Oranges, all uses (\$/box) 2/	5.40	7.18	8.89	8.45	5.82	8.22	8.47	5.63	4.70	4.93
Grapesfruit, all uses (\$/box) 2/	4.96	5.43	4.50	4.10	6.10	8.18	5.54	5.18	4.62	4.68
<b>Livestock</b>										
Beef cattle (\$/cwt)	81.40	88.80	89.70	71.60	88.20	87.40	89.80	71.00	73.70	74.80
Calves (\$/cwt)	78.10	89.90	91.90	95.90	91.10	90.20	88.70	89.10	91.00	95.70
Hogs (\$/cwt)	50.80	42.50	43.20	40.40	43.40	48.80	45.00	48.20	47.30	48.20
Lambs (\$/cwt)	77.90	89.50	87.30	88.40	85.90	83.10	58.70	59.00	56.40	61.00
All milk, sold to plants (\$/cwt)	12.54	12.24	13.51	13.10	14.00	14.50	16.50	18.10	15.70	14.90
Milk, manuf. grade (\$/cwt)	11.37	11.15	12.47	11.60	13.10	13.60	14.80	15.10	14.20	13.10
Broilers (cts./lb.)	28.3	34.0	36.4	35.2	37.1	30.8	29.8	28.6	30.7	33.5
Eggs (cts./doz.) 3/	53.1	53.2	69.8	62.1	71.0	71.3	78.8	82.8	83.8	70.4
Turkeys (cts./lb.)	34.3	36.9	40.2	38.3	37.3	38.5	40.9	39.6	35.9	33.7
Wool (cts./lb.) 4/	91.7	138.0	—	123.0	87.7	100.0	100.0	80.5	85.8	70.8

1/ Season average price by crop year for crops. Calendar year average of monthly prices for livestock. 2/ Equivalent on-tree returns. 3/ Average of all eggs sold by producers including hatching eggs & eggs sold at retail. 4/ Average local market price, excluding incentive payments. 5/ Weighted average of first 5 months of the season - not a projection for 1989/90. P = preliminary. R = revised. — = not available

Information contact: Ann Duncan (202) 786-3313

## Producer & Consumer Prices

Table 6.—Consumer Price Index for All Urban Consumers, U.S. Average (Not Seasonally Adjusted)

	Annual	1989								1990
	1989	Jan	June	July	Aug	Sept	Oct	Nov	Dec	Jan
		1982-84=100								
Consumer Price Index, all items	124.0	121.1	124.1	124.4	124.8	125.0	125.8	125.9	126.1	127.4
Consumer Price Index, less food	123.7	120.8	123.9	124.2	124.3	124.8	125.4	125.8	125.8	128.7
<b>All food</b>	125.1	122.2	125.0	125.5	125.8	126.1	126.5	126.9	127.4	130.4
Food away from home	127.4	124.7	127.1	127.8	128.1	128.8	129.1	129.5	129.0	130.3
Food at home	124.2	121.2	124.3	124.8	124.9	125.0	125.4	125.8	126.5	131.0
Meats 1/	118.7	114.0	118.1	118.7	117.5	117.7	118.1	119.3	120.0	122.3
Beef & veal	119.3	118.0	119.3	119.5	119.7	120.0	120.0	121.3	122.1	124.5
Pork	113.2	111.5	111.8	113.8	114.8	114.3	114.9	97.7	105.0	104.8
Poultry	132.7	128.8	140.1	138.1	138.2	134.0	131.2	128.8	127.8	128.8
Fish	143.6	144.0	142.9	142.3	145.2	148.9	143.9	142.0	143.0	149.0
Eggs	118.5	112.0	110.8	112.8	115.2	124.8	122.9	129.4	134.9	143.9
Dairy products 2/	115.6	112.8	113.8	114.1	114.5	118.1	118.2	120.2	122.9	125.8
Fats & oils 3/	121.2	119.8	121.8	121.8	121.7	121.3	121.8	121.0	121.8	123.5
Fresh fruit	152.4	145.4	151.7	150.8	151.4	155.1	158.8	152.7	154.8	171.4
Processed fruit	125.9	125.8	125.8	128.0	126.9	127.8	127.1	128.8	125.2	125.1
Fresh vegetables	143.1	141.4	150.8	150.8	145.1	133.9	134.8	141.9	138.5	178.9
Potatoes	153.5	130.8	172.5	180.7	182.3	153.1	139.8	135.0	140.0	150.1
Processed vegetables	124.2	120.9	125.5	128.3	125.9	125.0	124.8	123.8	124.8	125.4
Cereals & bakery products	132.4	127.9	132.1	133.3	134.1	134.8	135.0	135.3	136.1	138.9
Sugar & sweets	119.4	117.2	119.2	120.1	120.6	120.8	121.3	120.7	121.1	122.5
<b>Beverages, nonalcoholic</b>	111.3	109.6	111.8	112.3	111.2	111.0	111.8	111.2	111.0	112.4
<b>Apparel</b>										
Apparel, commodities less footwear	117.1	113.5	118.1	112.8	112.8	118.9	121.8	121.1	117.8	114.8
Footwear	114.4	112.2	114.0	113.4	112.8	114.1	117.8	118.8	114.7	113.1
Tobacco & smoking products	184.4	157.0	184.2	187.5	188.8	188.2	188.8	188.8	171.9	174.1
<b>Beverages, alcoholic</b>	123.5	120.3	123.5	124.0	124.5	124.8	125.2	125.5	125.6	128.2

1/ Beef, veal, lamb, pork, & processed meat. 2/ Includes butter. 3/ Excludes butter.

Information contact: Ann Duncan (202) 786-3313.



Table 7.—Producer Price Indexes, U.S. Average (Not Seasonally Adjusted)

	Annual			1989						1990
	1987	1988	1989 P	Jan	Aug	Sept R	Oct	Nov	Dec	Jan
	1982 = 100									
Finished goods 1/	105.4	108.0	113.5	111.1	113.4	113.6	114.8	114.8	115.3	117.5
Consumer foods	109.5	112.6	114.7	116.7	118.7	118.5	119.5	120.2	120.9	123.6
Fresh fruit	112.0	113.5	111.9	110.9	109.7	110.1	113.3	110.8	107.4	103.1
Fresh & dried vegetables	103.7	105.5	116.9	109.2	110.7	96.1	110.0	98.9	104.9	158.6
Dried fruit	95.0	99.1	103.0	101.1	103.6	102.4	103.4	103.6	106.2	106.9
Canned fruit & juice	115.3	120.2	122.6	122.5	123.3	123.2	122.8	122.6	123.4	123.9
Frozen fruit & juice	113.3	129.8	124.6	126.7	129.3	125.4	125.6	121.4	119.9	128.6
Fresh veg. excl. potatoes	99.0	100.4	104.2	93.4	96.3	81.5	101.0	84.1	88.0	159.9
Canned veg. & juices	103.5	108.3	118.6	118.7	118.5	119.9	118.0	117.7	118.5	119.5
Frozen vegetables	107.3	108.6	115.5	113.2	116.7	116.2	115.2	116.4	117.0	117.9
Potatoes	120.1	113.9	153.6	148.1	144.3	140.2	140.2	146.7	160.2	162.0
Eggs	87.6	98.6	119.6	127.3	116.7	124.6	124.3	134.5	141.3	154.8
Bakery products	118.4	126.4	135.4	132.0	137.1	137.7	137.9	137.2	137.6	138.7
Meats	100.4	99.9	104.9	102.8	106.0	105.3	104.8	107.1	108.4	110.6
Beef & veal	95.5	101.4	109.0	107.4	109.0	107.4	105.1	108.9	111.0	113.1
Pork	104.9	95.0	97.5	95.4	100.4	99.9	102.2	103.8	104.6	107.2
Processed poultry	103.4	111.6	120.8	116.3	121.2	119.7	113.7	112.3	110.2	107.9
Fish	140.0	148.7	144.6	151.6	135.6	133.9	146.7	146.5	143.2	156.2
Dairy products	101.6	102.2	110.6	107.1	110.7	113.3	116.5	120.4	121.4	120.9
Processed fruits & vegetables	108.6	113.8	120.0	119.0	121.2	120.7	120.2	120.0	120.8	122.5
Shortening & cooking oil	103.9	118.8	116.6	117.2	114.0	115.5	114.6	117.5	115.8	116.6
Consumer finished goods less foods	100.7	103.1	108.9	105.8	108.6	109.1	110.3	109.8	110.4	113.2
Beverages, alcoholic	110.3	111.8	115.2	112.2	117.2	114.4	114.5	114.7	114.5	115.0
Soft drinks	111.8	114.3	117.2	116.3	115.6	116.5	117.5	118.2	118.0	119.6
Apparel	109.3	111.7	114.5	113.7	114.9	115.0	115.2	115.4	115.5	116.5
Footwear	109.3	115.1	120.8	118.1	121.8	122.3	122.6	122.4	123.3	123.7
Tobacco products	154.6	171.9	194.9	187.2	198.1	198.1	200.7	200.4	209.2	209.6
Intermediate materials 2/	101.5	107.1	112.0	110.6	112.0	112.4	112.3	112.2	112.0	113.4
Materials for food manufacturing	100.8	106.0	112.7	110.4	113.3	113.7	113.3	115.4	115.4	115.5
Flour	92.9	105.7	114.6	114.8	114.8	113.7	112.4	112.7	113.8	113.2
Refined sugar 3/	106.4	108.9	118.3	115.8	118.6	120.4	120.6	119.8	121.5	122.3
Crude vegetable oils	84.2	116.6	103.4	108.9	96.7	95.1	94.1	102.4	97.6	100.2
Crude materials 4/	93.7	96.0	103.0	101.4	101.1	102.3	101.8	102.3	104.0	106.7
Foodstuffs & feedstuffs	96.2	106.1	111.1	112.5	110.0	108.9	107.2	109.4	112.3	113.6
Fruits & vegetables 5/	106.8	108.5	114.1	109.4	109.7	101.8	110.9	103.6	105.5	133.5
Grains	71.1	97.9	106.4	115.2	100.3	100.1	98.2	101.1	101.0	100.8
Livestock	102.0	103.3	106.0	104.5	108.3	103.7	104.1	105.1	110.0	110.2
Poultry, live	101.2	121.5	128.8	122.4	125.4	134.9	109.0	111.8	104.3	108.9
Fibers, plant & animal	106.4	98.4	107.8	95.8	116.8	113.9	116.9	115.3	106.3	104.8
Fluid milk	91.8	89.4	98.1	96.4	98.1	103.1	105.1	110.5	115.6	117.0
Oilseeds	99.2	134.0	123.8	143.6	115.3	113.6	101.7	106.1	106.7	106.1
Tobacco, leaf	85.7	87.2	93.9	94.4	92.4	96.3	95.0	93.7	93.7	93.7
Sugar, raw cane	110.2	111.9	115.5	111.0	118.3	118.8	117.8	118.2	117.2	119.3
All commodities	102.8	106.9	112.2	110.5	112.0	112.4	112.7	112.7	113.0	114.9
Industrial commodities <sup>6</sup>	102.5	106.3	111.6	109.6	111.4	111.9	112.4	112.2	112.3	114.2
All foods 6/	107.8	111.5	117.8	115.7	117.8	117.5	118.4	119.3	120.0	122.7
Farm products & processed foods & feeds	103.7	110.0	115.3	115.0	115.0	114.5	114.3	115.4	116.5	118.2
Farm products	85.5	104.9	110.7	112.0	109.3	108.0	106.9	108.5	111.1	114.5
Processed foods & feeds 6/	107.9	112.7	117.8	116.8	117.9	117.9	118.1	119.0	119.3	120.2
Cereal & bakery products	112.6	123.0	131.1	128.2	132.9	132.8	132.9	132.4	132.9	133.0
Sugar & confectionery	112.6	114.7	120.1	117.8	121.3	121.6	120.4	120.5	120.9	120.9
Beverages	112.5	114.3	118.3	116.5	118.3	117.1	117.5	117.7	117.7	118.6

1/ Commodities ready for sale to ultimate consumer. 2/ Commodities requiring further processing to become finished goods. 3/ All types & sizes of refined sugar. 4/ Products entering market for the first time that have not been manufactured at that point. 5/ Fresh & dried. 6/ Includes all raw, intermediate, & processed foods (excludes soft drinks, alcoholic beverages, & manufactured animal feeds). P = preliminary. R = revised.

Information contact: Ann Duncan (202) 786-3313.

## Farm-Retail Price Spreads

Table 8.—Farm-Retail Price Spreads

	Annual			1989						1990
	1987	1988	1989 P	Jan	Aug	Sept	Oct	Nov	Dec	Jan
<b>Market basket 1/</b>										
Retail cost (1982-84=100)	111.6	116.5	124.6	121.5	125.4	125.5	125.9	126.6	127.4	132.2
Farm value (1982-84=100)	97.1	100.5	107.3	108.4	106.9	108.2	105.6	108.8	110.5	118.5
Farm-retail spread (1982-84=100)	119.4	125.1	134.0	129.6	135.4	135.9	136.9	136.1	136.5	139.5
Farm value-retail cost (%)	30.5	30.2	30.1	30.7	29.8	29.6	29.4	30.1	30.4	31.4
<b>Meat products</b>										
Retail cost (1982-84=100)	109.8	112.2	118.7	114.0	117.5	117.7	118.1	119.3	120.0	122.3
Farm value (1982-84=100)	101.2	99.5	103.3	102.7	104.3	101.5	100.9	104.0	106.9	111.2
Farm-retail spread (1982-84=100)	118.3	125.2	130.4	125.6	131.1	134.3	135.8	135.0	133.4	133.7
Farm value-retail cost (%)	46.7	44.9	44.8	45.6	44.9	43.7	43.2	44.1	45.1	46.1
<b>Dairy products</b>										
Retail cost (1982-84=100)	105.9	108.4	115.6	112.6	114.5	116.1	118.2	120.2	122.9	125.8
Farm value (1982-84=100)	93.3	90.6	99.1	97.9	98.2	101.0	104.8	110.0	113.0	117.9
Farm-retail spread (1982-84=100)	117.5	124.7	130.9	128.1	129.5	130.1	130.5	129.6	132.0	133.0
Farm value-retail cost (%)	42.3	40.1	41.1	41.7	41.1	41.7	42.6	43.8	44.1	45.0
<b>Poultry</b>										
Retail cost (1982-84=100)	112.6	120.7	132.7	128.8	136.2	134.0	131.2	128.8	127.8	128.6
Farm value (1982-84=100)	93.8	110.2	118.2	112.8	117.8	118.6	101.6	100.6	96.7	100.6
Farm-retail spread (1982-84=100)	134.2	132.8	149.3	147.2	157.4	151.7	165.3	157.0	163.6	160.9
Farm value-retail cost (%)	44.6	48.9	47.7	46.9	46.3	47.4	41.4	42.4	40.5	41.9
<b>Eggs</b>										
Retail cost (1982-84=100)	91.5	93.6	118.5	112.0	115.2	124.6	122.9	129.4	134.9	143.9
Farm value (1982-84=100)	76.8	76.7	107.7	96.6	110.3	110.7	110.3	125.1	133.4	135.4
Farm-retail spread (1982-84=100)	117.9	123.9	137.7	139.7	123.9	149.6	145.5	137.1	137.6	159.1
Farm value-retail cost (%)	53.9	52.7	58.4	55.4	61.5	57.1	57.7	62.1	63.5	60.5
<b>Cereal &amp; bakery products</b>										
Retail cost (1982-84=100)	114.8	122.1	132.4	127.9	134.1	134.6	135.0	135.3	136.1	136.9
Farm value (1982-84=100)	71.0	92.7	101.7	102.4	99.4	99.9	96.7	99.4	101.2	101.9
Farm-retail spread (1982-84=100)	120.9	126.2	136.7	131.5	138.9	139.4	140.1	140.3	141.0	141.8
Farm value-retail cost (%)	7.6	9.3	9.4	9.8	9.1	9.1	9.0	9.0	9.1	9.1
<b>Fresh fruits</b>										
Retail cost (1982-84=100)	135.6	145.4	154.7	150.1	154.5	158.8	159.8	155.3	158.6	177.3
Farm value (1982-84=100)	113.9	116.5	108.9	103.2	107.4	126.6	131.6	128.2	109.2	122.1
Farm-retail spread (1982-84=100)	145.7	158.7	175.8	171.8	176.2	173.6	172.8	167.8	181.4	202.8
Farm value-retail cost (%)	26.5	25.3	22.2	21.7	22.0	25.2	26.0	26.1	21.7	21.8
<b>Fresh vegetables</b>										
Retail cost (1982-84=100)	121.6	129.3	143.1	141.4	145.1	133.9	134.8	141.9	136.5	176.9
Farm value (1982-84=100)	112.0	105.8	124.0	134.1	127.0	94.8	111.3	113.4	98.2	194.6
Farm-retail spread (1982-84=100)	126.5	141.3	152.9	145.2	154.4	154.0	146.9	156.5	156.2	167.8
Farm value-retail cost (%)	31.3	27.8	29.4	32.2	29.7	24.0	28.0	27.1	24.4	37.4
<b>Processed fruits &amp; vegetables</b>										
Retail cost (1982-84=100)	109.0	117.6	125.0	123.4	126.3	126.4	125.9	125.0	124.9	125.1
Farm value (1982-84=100)	111.1	136.6	134.6	138.3	133.2	136.7	136.8	135.8	130.6	136.9
Farm-retail spread (1982-84=100)	108.3	111.7	122.0	118.8	124.1	123.2	122.5	121.6	123.1	121.4
Farm value-retail cost (%)	24.2	27.6	25.6	26.6	25.1	25.7	25.8	25.8	24.8	26.0
<b>Fats &amp; oils</b>										
Retail cost (1982-84=100)	108.1	113.1	121.2	119.6	121.7	121.3	121.6	121.0	121.6	123.5
Farm value (1982-84=100)	74.1	103.0	95.7	98.7	80.2	87.9	86.7	95.2	93.0	93.0
Farm-retail spread (1982-84=100)	120.6	116.8	130.5	127.3	137.0	133.6	134.4	130.5	132.1	134.7
Farm value-retail cost (%)	18.6	24.5	21.2	22.2	17.7	19.5	19.2	21.2	20.6	20.3
	Annual			1989						1990
	1987	1988	1989 P	Jan	Aug	Sept	Oct	Nov	Dec	Jan
<b>Beef, Choice</b>										
Retail price 2/ (cts./lb.)	242.5	254.7	269.9	264.3	269.5	270.9	270.8	272.9	274.4	281.3
Net carcass value 3/ (cts.)	145.3	153.9	160.6	159.6	155.8	152.3	153.8	156.6	165.9	168.7
Net farm value 4/ (cts.)	137.8	147.4	155.4	155.8	152.2	144.2	148.3	154.8	160.4	163.3
Farm-retail spread (cts.)	104.6	107.3	114.5	108.5	117.3	126.7	122.5	118.1	114.0	118.0
Carcass-retail 5/ (cts.)	97.2	100.8	109.3	104.5	113.9	116.6	117.0	113.3	108.5	112.6
Farm-carcass 6/ (cts.)	7.4	6.5	5.2	4.0	3.4	8.1	5.5	4.8	5.5	5.4
Farm value-retail price (%)	57	58	58	59	56	53	55	57	58	58
<b>Pork</b>										
Retail price 2/ (cts./lb.)	188.4	183.4	182.9	181.1	184.6	184.4	185.8	189.6	191.2	195.1
Wholesale value 3/ (cts.)	113.0	101.0	99.2	94.3	101.3	100.6	106.1	108.9	112.3	104.8
Net farm value 4/ (cts.)	82.7	69.4	70.4	66.7	74.6	70.3	75.6	73.2	79.5	76.6
Farm-retail spread (cts.)	105.7	114.0	112.5	114.4	110.0	114.1	110.2	116.4	111.7	118.5
Wholesale-retail 5/ (cts.)	75.4	82.4	83.7	86.8	83.3	83.8	79.7	82.7	78.9	90.3
Farm-wholesale 6/ (cts.)	30.3	31.6	28.8	27.6	26.7	30.3	30.5	33.7	32.8	28.2
Farm value-retail price (%)	44	38	38	37	40	38	41	39	42	39

1/ Retail costs are based on CPI-U of retail prices for domestically produced farm foods, published monthly by BLS. The farm value is the payment for the quantity of farm equivalent to the retail unit, less allowance for byproduct. Farm values are based on prices at first point of sale & may include marketing charges such as grading & packing for some commodities. The farm-retail spread, the difference between the retail price & the farm value, represents charges for assembling, processing, transporting, distributing. 2/ Weighted average price of retail cuts from pork & choice yield grade 3 beef carcasses. Prices from BLS. 3/ Value of carcass quantity (beef) & wholesale cuts (pork) equivalent to 1 lb. of retail cuts; beef adjusted for value of fat & bone byproducts. 4/ Market value to producer for live animal equivalent to 1 lb. of retail cuts, minus value of byproducts. 5/ Charges for retailing & other marketing services such as fabricating, wholesaling, in-city transportation. 6/ Charges for livestock marketing, processing, & transportation.

Information contacts: Denis Dunham (202) 786-1870, Ron Gustafson (202) 786-1286.

Table 9.—Price Indexes of Food Marketing Costs

(See the March 1990 Issue.)

Information contact: Denis Dunham (202) 786-1870.

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# Livestock & Products

Table 10.—U.S. Meat Supply & Use

	Beg. stocks	Production 1/	Imports	Total supply	Exports	Ending stocks	Consumption		Primary market price 3/
							Total	Per capita 2/	
				Million pounds 4/			Pounds		
<b>Beef</b>									
1987	412	23,566	2,269	26,247	604	386	25,257	73.4	64.60
1988	386	23,589	2,379	26,354	680	422	25,252	72.3	69.54
1989	422	23,138	2,175	25,735	1,062	335	24,338	69.0	72.52
1990 F	335	23,465	2,140	25,940	1,200	310	24,430	68.7	70-76
<b>Pork</b>									
1987	248	14,374	1,195	15,817	109	347	15,362	59.1	51.69
1988	347	15,684	1,137	17,168	195	413	16,560	63.5	43.39
1989	413	15,820	896	17,129	268	285	16,576	63.2	44.03
1990 F	285	15,586	940	16,811	275	375	16,181	61.1	47-53
<b>Veal 5/</b>									
1987	7	429	24	460	7	4	449	1.5	78.05
1988	4	396	27	427	10	5	412	1.4	89.78
1989	5	353	0	358	0	4	354	1.2	91.61
1990 F	4	329	0	333	0	4	329	1.1	90-96
<b>Lamb &amp; mutton</b>									
1987	13	315	44	372	2	8	364	1.3	78.09
1988	8	335	51	394	1	6	387	1.4	68.26
1989	6	347	63	416	2	8	406	1.5	67.32
1990 F	8	361	63	432	1	7	424	1.5	61-68
<b>Total red meat</b>									
1987	680	38,684	3,532	42,895	722	744	41,432	136.0	—
1988	744	40,004	3,594	44,343	886	846	42,610	138.6	—
1989	846	39,658	3,134	43,638	1,332	632	41,674	134.8	—
1990 F	632	39,741	3,143	43,516	1,476	696	41,344	132.3	—
<b>Broilers</b>									
1987	24	15,594	0	15,618	752	25	14,842	60.8	47.4
1988	25	18,180	0	18,205	765	36	15,404	62.5	56.3
1989	36	17,392	0	17,428	867	38	16,523	66.5	59.0
1990 F	38	18,650	0	18,688	940	30	17,718	70.6	51-57
<b>Mature chicken</b>									
1987	183	639	0	802	15	188	599	2.4	—
1988	188	638	0	826	26	157	644	2.6	—
1989	157	625	0	782	25	190	567	2.3	—
1990 F	190	632	0	822	20	150	652	2.6	—
<b>Turkeys</b>									
1987	178	3,832	0	4,010	33	266	3,711	15.2	57.8
1988	266	3,968	0	4,234	51	250	3,934	16.0	61.5
1989	250	4,229	0	4,479	40	234	4,205	16.9	66.7
1990 F	234	4,450	0	4,684	48	250	4,386	17.5	56-62
<b>Total poultry</b>									
1987	365	20,065	0	20,430	800	479	19,151	78.5	—
1988	479	20,786	0	21,265	842	442	19,981	81.1	—
1989	442	22,247	0	22,689	932	462	21,294	85.6	—
1990 F	462	23,732	0	24,194	1,008	430	22,756	90.7	—
<b>Red meat &amp; poultry</b>									
1987	1,045	58,749	3,532	63,326	1,521	1,224	60,581	214.4	—
1988	1,224	60,790	3,594	65,608	1,728	1,288	62,592	219.7	—
1989	1,288	61,905	3,134	66,327	2,364	1,094	62,969	220.5	—
1990 F	1,094	63,473	3,143	67,710	2,484	1,126	64,100	223.1	—

1/ Total including farm production for red meats & federally inspected plus nonfederally inspected for poultry. 2/ Retail weight basis. (The beef carcass-to-retail conversion factor was .71 for 1987, & 70.5 for 1988-90.) 3/ Dollars per cwt for red meat; cents per pound for poultry. Beef: Choice steers, Omaha 1,000-1,100 lb.; pork: barrows and gilts, 7 markets; veal: farm price of calves; lamb & mutton: Choice slaughter lambs, San Angelo; broilers, wholesale 12-city average; turkeys: wholesale NY 8-16 lb. young hens. 4/ Carcass weight for red meats & certified ready-to-cook for poultry. 5/ Beginning 1989 veal trade no longer reported separately. F = forecast. — = not available.

Information contacts: Polty Cochran, or Maxine Davis (202) 786-1284.

Table 11.—U.S. Egg Supply &amp; Use

	Beg. stocks	Pro-duction	Im-ports	Total supply	Ex-ports	Hatch-ing use	Ending stocks	Consumption		Wholesale price*
								Total	Per capita	
										Cts./doz.
Million dozen										
1985	11.1	5,710.1	12.7	5,733.9	70.6	548.1	10.7	5,104.5	255.9	66.4
1986	10.7	5,766.3	13.7	5,790.7	101.6	566.8	10.4	5,111.9	253.8	71.1
1987	10.4	5,868.2	5.6	5,884.2	111.2	599.1	14.4	5,159.5	253.8	61.6
1988	14.4	5,783.5	5.3	5,803.2	141.8	605.9	15.2	5,040.3	245.5	62.1
1989 P	15.2	5,585.8	25.2	5,626.1	91.6	641.6	10.7	4,882.3	235.7	81.9
1990 F	10.7	5,690.0	11.0	5,711.7	104.0	675.0	10.0	4,922.7	235.6	71-75

\* Cartoned grade A large eggs, New York. P = preliminary. F = forecast.

Information contact: Maxine Davis (202) 786-1714.

Table 12.—U.S. Milk Supply & Use<sup>1</sup>

	Pro-duction	Farm use	Commercial		Im-ports	Total commer- cial supply	CCC net re- movals	Commercial		All milk price 2/
			Farm market- ings	Beg. stock				Ending stocks	Disap- pear- ance	
Billion pounds										
1982	135.5	2.4	133.1	5.4	2.5	141.0	14.3	4.6	122.1	13.61
1983	139.6	2.4	137.2	4.6	2.6	144.4	16.8	5.2	122.4	13.58
1984	135.4	2.9	132.4	5.2	2.7	140.4	8.6	4.9	126.8	13.46
1985	143.0	2.5	140.6	4.9	2.8	148.3	13.2	4.6	130.6	12.75
1986	143.1	2.4	140.7	4.6	2.7	148.1	10.6	4.2	133.3	12.51
1987	142.7	2.3	140.5	4.2	2.5	147.1	6.7	4.6	135.8	12.54
1988	145.2	2.2	142.9	4.6	2.4	150.0	8.9	4.3	136.8	12.24
1989 F	144.3	2.2	142.0	4.3	2.5	148.8	9.0	4.1	135.8	13.54
1990 F	146.9	2.2	144.7	4.1	2.4	151.2	8.1	4.6	138.5	12.35

<sup>1/</sup> Milkfat basis. Totals may not add because of rounding. <sup>2/</sup> Delivered to plants & dealers; does not reflect deductions. F = forecast.

Information contact: Jim Miller (202) 786-1770.

Table 13.—Poultry &amp; Eggs

	Annual			1989						1990
	1987	1988	1989	Jan	Aug	Sept	Oct	Nov	Dec	Jan
<b>Broilers</b>										
Federally inspected slaughter, certified (mil. lb.)	15,502.5	16,124.4	17,334	1,386.0	1,604.9	1,425.3	1,497.1	1,432.2	1,491.1	1,511.8
Wholesale price, 12-city (cts./lb.)	47.4	58.3	59.0	58.0	57.3	59.9	51.7	49.2	48.4	51.7
Price of grower feed (\$/ton)	186	220	235	246	233	239	223	221	220	224
Broiler-feed price ratio 1/	3.7	3.1	3.1	2.9	3.1	3.1	2.7	2.7	2.6	2.7
Stocks beginning of period (mil. lb.)	23.9	24.8	35.9	35.9	34.9	39.7	35.9	34.5	40.6	38.3
Broiler-type chicks hatched (mil.) 2/	5,379.2	5,601.0	5,932.4	481.3	509.3	484.0	483.7	469.3	521.4	516.3
<b>Turkeys</b>										
Federally inspected slaughter, certified (mil. lb.)	3,717	3,923	4,174	254.1	430.3	385.7	422.1	423.1	334.9	317.2
Wholesale price, Eastern U.S., 8-16 lb. young hens (cts./lb.)	57.8	61.2	66.7	59.0	62.6	57.9	67.8	72.5	72.7	55.6
Price of turkey grower feed (\$/ton)	213	243	252	262	250	249	243	241	240	239
Turkey-feed price ratio 1/	3.9	3.0	3.2	2.7	3.3	3.0	3.2	3.4	3.3	3.0
Stocks beginning of period (mil. lb.)	178.2	266.2	249.7	249.7	496.7	574.3	569.3	571.8	258.0	236.5
Poults placed in U.S. (mil.)	264.2	261.4	289.8	23.1	23.0	19.9	20.1	20.7	21.8	24.7
<b>Eggs</b>										
Farm production (mil.)	70,418	69,402	67,029	5,739	5,598	5,439	5,648	5,556	5,760	5,670
Average number of layers (mil.)	284	277	269	272	266	267	268	270	271	271
Rate of lay (eggs per layer on farms)	248	251	250	21.1	21.0	20.4	21.0	20.8	21.3	20.9
Cartoned price, New York, grade A large (cts./doz.) 3/	61.6	62.1	61.9	72.0	84.2	83.8	84.8	93.4	99.6	92.4
Price of laying feed (\$/ton)	170	202	209	217	209	209	200	199	200	199
Egg-feed price ratio 1/	6.3	5.3	6.7	5.9	6.8	6.8	7.1	7.9	8.3	8.4
<b>Stocks, first of month</b>										
Shell (mil. doz.)	0.66	1.29	0.27	0.27	0.36	0.51	0.69	0.18	0.33	0.36
Frozen (mil. doz.)	9.8	13.1	14.9	14.9	12.5	11.4	10.9	11.3	10.1	10.3
Replacement chicks hatched (mil.)	428	368	383	26.6	32.4	32.7	33.3	29.9	29.3	32.0

1/ Pounds of feed equal in value to 1 dozen eggs or 1 lb. of broiler or turkey liveweight. 2/ Placement of broiler chicks is currently reported for 15 States only; henceforth, hatch of broiler-type chicks will be used as a substitute. 3/ Price of cartoned eggs to volume buyers for delivery to retailers.

Information contact: Maxine Davis (202) 786-1714.



Table 14.—Dairy

	Annual			1989						1990
	1987	1988	1989	Jan	Aug	Sept	Oct	Nov	Dec	Jan
Milk prices, Minnesota-Wisconsin, 3.5% fat (\$/cwt) 1/	11.23	11.03	12.37	11 90	12.37	13.10	13.87	14.69	14.93	13.94
Wholesale prices										
Butter, grade A Chl. (cts./lb.)	140.2	132.5	127.9	131.0	132.8	125.1	120.5	120.5	120.0	110.8
Am. cheese, Wis. assembly pt. (cts./lb.)	123.2	123.8	138.8	129.1	143.2	155.8	180.3	183.6	182.2	152.3
Nonfat dry milk (cfs./lb.) 2/	79.3	80.2	105.5	93.6	110.7	121.7	139.9	158.7	128.0	88.2
USDA net removals										
Total milk equiv. (mil. lb.) 3/	8,708.0	8,856.2	8,967.9	1,583.2	-89.5	182.9	158.4	183.7	483.4	1,490.9
Butter (mil. lb.)	187.3	312.6	413.4	73.8	-5.1	7.7	7.4	7.7	22.1	71.8
Am. cheese (mil. lb.)	282.0	238.1	37.4	3.5	3.1	0	0	0	0	0
Nonfat dry milk (mil. lb.)	559.4	287.5	0	0	0	0	0	0	0	2.9
Milk										
Milk prod. 21 States (mil. lb.)	121,431	123,518	122,531	10,453	10,074	9,668	9,878	9,854	10,047	10,431
Milk per cow (lb.)	13,889	14,291	14,370	1,217	1,184	1,137	1,161	1,132	1,176	1,222
Number of milk cows (1,000)	8,883	8,643	8,527	8,589	8,508	8,501	8,510	8,531	8,544	8,535
U.S. milk production (mil. lb.)	142,709	145,152	144,252	12,298	11,846	11,368	11,681	11,396	11,860	12,272
Stock, beginning										
Total (mil. lb.)	12,887	7,440	8,189	9,189	13,817	13,308	12,102	11,092	9,586	8,770
Commercial (mil. lb.)	4,185	4,646	4,289	4,289	5,899	5,809	5,228	4,849	4,175	4,109
Government (mil. lb.)	8,702	2,794	3,900	3,900	7,918	7,499	6,874	6,243	5,410	4,661
Imports, total (mil. lb.) 3/	2,490	2,394	2,536	217	240	226	240	268	286	—
Commercial disappearance (mil. lb.)	135,753	138,812	135,773	10,378	12,056	11,829	11,933	11,991	11,560	—
Butter										
Production (mil. lb.)	1,104.1	1,207.5	1,260.3	129.0	80.1	82.1	92.7	93.6	107.7	127.1
Stocks, beginning (mil. lb.)	193.0	143.2	214.7	214.7	481.0	439.2	407.6	370.4	294.1	256.2
Commercial disappearance (mil. lb.)	902.5	909.8	840.9	45.5	88.5	78.7	85.1	115.5	87.8	—
American cheese										
Production (mil. lb.)	2,716.7	2,756.8	2,876.2	225.8	214.0	200.3	206.8	210.2	228.7	231.7
Stocks, beginning (mil. lb.)	697.1	370.4	293.0	293.0	315.9	308.4	273.8	249.8	235.7	230.8
Commercial disappearance (mil. lb.)	2,437.1	2,570.0	2,887.4	216.2	220.4	233.4	230.2	225.3	229.7	—
Other cheese										
Production (mil. lb.)	2,627.7	2,815.0	2,903.6	230.9	246.4	246.8	245.3	244.0	254.0	252.1
Stocks, beginning (mil. lb.)	92.0	89.7	104.7	104.7	118.3	117.6	96.8	81.3	95.4	93.2
Commercial disappearance (mil. lb.)	2,680.2	3,034.1	3,171.1	239.3	271.8	291.4	291.1	259.5	288.5	—
Nonfat dry milk										
Production (mil. lb.)	1,056.8	978.5	871.2	87.1	53.9	46.3	48.0	50.8	62.5	61.4
Stocks, beginning (mil. lb.)	686.8	177.2	53.1	53.1	66.9	58.9	44.8	36.2	32.5	49.5
Commercial disappearance (mil. lb.)	482.9	733.1	869.8	71.9	63.8	59.1	56.7	54.8	46.4	—
Frozen dessert										
Production (mil. gal.) 4/	1,260.7	1,246.9	1,231.2	80.5	122.1	101.2	90.3	85.5	79.2	79.5
	Annual			1988						1990
	1987	1988	1989	II	III	IV	I	II P	III P	IV P
Milk production (mil. lb.)	142,709	145,152	144,252	37,840	35,920	35,282	36,445	37,702	35,188	34,917
Milk per cow (lb.)	13,819	14,145	14,244	3,683	3,508	3,447	3,588	3,727	3,484	3,448
No. of milk cows (1,000)	10,327	10,262	10,127	10,274	10,245	10,229	10,164	10,116	10,101	10,127
Milk-feed price ratio 5/	1.84	1.58	1.64	1.51	1.46	1.59	1.56	1.48	1.63	1.61
Returns over concentrate 5/ costs (\$/cwt milk)	9.52	9.05	10.08	8.33	8.53	9.86	9.63	8.80	9.80	12.10

1/ Manufacturing grade milk. 2/ Prices paid f.o.b. Central States production area. 3/ Milk equivalent, fat basis. 4/ Ice cream, ice milk, & hard sherbet. 5/ Based on average milk price after adjustment for price support deductions. 6/ Estimated. P = preliminary. — = not available.

Information contact: Jim Miller (202) 786-1770.

Table 15.—Wool

	Annual			1989						1990
	1987	1988	1989 P	Jan	Aug	Sept	Oct	Nov	Dec	Jan
U.S. wool price, (cts./lb.) 1/	265	438	370	304	350	350	350	333	300	304
Imported wool price, (cts./lb.) 2/	247	372	354	324	330	333	335	335	338	315
U.S. mill consumption, scoured										
Apparel wool (1,000 lb.)	129,877	117,069	125,554	10,810	9,741	10,767	9,931	9,017	10,873	—
Carpet wool (1,000 lb.)	13,092	15,633	15,872	800	1,472	1,794	1,288	963	1,075	—

1/ Wool price delivered at U.S. mills, clean basis. Graded Territory 64's (20.60-22.04 microns) staple 2-3/4" & up. 2/ Wool price, Charleston, SC warehouse, clean basis, Australian 60/62's, type 64A (24 micron). Duty since 1982 has been 10.0 cents. P = preliminary. — = not available.

Information contact: John Lawler (202) 786-1840.

Table 16.—Meat Animals

	Annual			1989						1990
	1987	1988	1989	Jan	Aug	Sept	Oct	Nov	Dec	Jan
<b>Cattle on feed (7 States)</b>										
Number on feed (1,000 head) 1/	7,953	8,411	8,045	8,045	8,763	8,631	8,958	7,911	8,331	8,378
Placed on feed (1,000 head)	21,040	20,654	20,834	1,708	1,838	1,953	2,652	2,001	1,552	1,896
Marketings (1,000 head)	19,545	19,918	19,422	1,677	1,694	1,579	1,828	1,490	1,418	1,634
Other disappearance (1,000 head)	1,217	1,202	1,079	104	76	47	71	91	87	114
<b>Beef steer-corn price ratio, Omaha 2/</b>	41.0	31.5	30.3	28.2	32.0	30.8	31.1	32.2	32.8	34.2
<b>Hog-corn price ratio, Omaha 2/</b>	32.8	19.8	18.4	18.4	20.9	19.8	20.9	20.1	21.7	21.6
<b>Market prices (\$/cwt)</b>										
<b>Slaughter cattle</b>										
Choice steers, Omaha	84.60	69.54	72.52	72.35	71.09	68.44	69.69	72.48	75.21	76.73
Utility cows, Omaha	44.83	48.55	47.88	44.88	50.39	52.42	49.42	46.60	49.38	49.78
Choice vealers, S. St. Paul 3/	78.82	90.23	248.92	230.23	283.00	258.75	244.38	242.90	230.00	248.50
<b>Feeder cattle</b>										
Choice, Kansas City, 800-700 lb.	75.38	83.87	88.13	86.00	88.40	88.83	88.25	87.38	86.25	85.70
<b>Slaughter hogs</b>										
Barrows & gilts, 7-markets	51.89	43.39	44.03	41.58	46.84	44.32	47.15	45.77	49.33	47.94
<b>Feeder pigs</b>										
S. Mo. 40-50 lb. (per head)	46.89	38.08	33.83	35.25	30.00	30.72	37.27	38.33	36.21	41.78
<b>Slaughter sheep &amp; lambs</b>										
Lambs, Choice, San Angelo	78.09	68.26	67.32	68.13	67.28	63.81	59.83	58.08	61.00	55.20
Ewes, Good, San Angelo	38.62	38.88	38.58	48.13	30.85	30.31	28.00	35.25	39.42	38.30
<b>Feeder lambs</b>										
Choice, San Angelo	102.28	90.89	79.85	84.88	75.50	76.08	74.88	74.88	76.00	72.10
<b>Wholesale meat prices, Midwest</b>										
Choice steer beef, 800-700 lb.	97.24	103.34	107.78	107.30	104.31	102.08	103.13	107.05	111.41	113.30
Canner & cutter cow beef	85.28	87.77	94.43	91.23	95.33	99.14	96.14	92.92	100.73	99.89
Pork loins, 14-18 lb. 4/	108.23	97.49	101.09	89.35	110.03	105.25	111.78	91.75	107.28	101.38
Pork bellies, 12-14 lb.	83.11	41.25	34.14	38.91	28.82	34.23	38.88	49.98	42.23	48.65
Hams, skinned, 14-17 lb.	80.96	71.03	69.39	65.80	68.00	69.13	80.68	87.00	78.89	68.44
<b>All fresh beef retail price 5/</b>	212.64	224.81	238.97	232.09	240.11	241.00	241.20	243.69	245.36	247.81
<b>Commercial slaughter (1,000 head)*</b>										
<b>Cattle</b>	35,847	35,079	33,918	2,789	3,045	2,773	2,984	2,785	2,681	2,851
Steers	17,443	17,344	16,535	1,327	1,491	1,352	1,373	1,299	1,284	1,360
Heifers	10,908	10,754	10,405	850	972	874	931	815	789	829
Cows	6,810	6,337	6,317	681	519	489	606	611	559	606
Bulls & stags	889	844	859	51	53	58	64	60	49	56
Calves	2,816	2,508	2,172	203	185	179	198	182	172	181
Sheep & lambs	5,199	5,293	5,484	428	494	457	484	482	470	489
Hogs	81,081	87,795	88,893	7,332	7,587	7,680	8,032	8,039	7,238	7,605
<b>Commercial production (mil. lb.)</b>										
Beef	23,405	23,424	22,973	1,898	2,091	1,912	2,041	1,906	1,828	1,932
Veal	416	387	345	32	29	28	31	28	25	27
Lamb & mutton	309	329	339	27	29	28	28	31	31	32
Pork	14,312	15,623	15,754	1,310	1,333	1,349	1,421	1,446	1,288	1,359

	Annual			1988		1989				1990
	1987	1988	1989	III	IV	I	II	III	IV	I
<b>Cattle on feed (13 States)</b>										
Number on feed (1,000 head) 1/	9,555	10,114	9,888	9,308	8,851	9,688	9,918	9,680	8,276	9,443
Placed on feed (1,000 head)	25,074	24,423	24,484	6,031	6,655	6,232	5,212	5,719	7,321	—
Marketings (1,000 head)	23,128	23,459	22,955	6,261	5,466	5,658	6,040	5,898	5,361	7/ 5,885
Other disappearance (1,000 head)	1,389	1,390	1,274	225	352	344	410	227	293	—
<b>Hogs &amp; pigs (10 States) 6/</b>										
Inventory (1,000 head) 1/	39,730	42,875	43,210	44,085	45,000	43,210	41,655	44,020	45,200	42,200
Breeding (1,000 head) 1/	5,125	5,435	5,335	5,630	5,460	5,335	5,440	5,565	5,335	5,280
Market (1,000 head) 1/	34,605	37,240	37,875	38,435	39,540	37,875	36,215	38,455	39,865	36,920
Farrowings (1,000 head)	8,853	9,370	9,203	2,358	2,301	2,109	2,580	2,324	2,190	2,084
Pig crop (1,000 head)	68,955	72,288	71,807	18,000	17,620	16,441	20,309	18,187	16,890	—

1/ Beginning of period. 2/ Buys of corn equal in value to 100 pounds live weight. 3/ Per head starting September 1988. 4/ Prior to 1984, 8-14 lb.; 1984 & 1985, 14-17 lb.; beginning 1986, 14-18 lb. 5/ New series estimating the composite price of all beef grades & ground beef sold by retail stores. This new series is in addition to, but does not replace, the series for the retail price of Choice beef that appears in table 8. 6/ Quarters are Dec. of preceding year-Feb. (I), Mar.-May (II), June-Aug. (III), & Sept.-Nov. (IV). 7/ Intentions. \*Classes estimated. — = not available.

Information contacts: Polly Cochran (202) 786-1284.



## Crops &amp; Products

Table 17.—Supply & Utilization<sup>1,2</sup>

	Area		Harvest- ed	Yield	Produc- tion	Total supply 4/	Feed and resid- ual	Other domes- tic use	Ex- ports	Total use	Ending stocks	Farm price 5/
	Sel sals 3/	Planted										
	Mil. acres		Bu./acre		Lb./acre		Mil. bu.					
Wheat												\$/bu.
1984/85	18.3	79.2	66.9	38.8	2,595	4,003	405	749	1,424	2,578	1,425	3.39
1985/86	18.8	75.6	64.7	37.5	2,425	3,868	279	767	915	1,981	1,905	3.08
1986/87	21.0	72.1	60.7	34.4	2,092	4,018	413	780	1,004	2,197	1,821	2.42
1987/88	23.9	65.8	56.0	37.7	2,107	3,945	280	808	1,598	2,684	1,261	2.57
1988/89*	22.6	65.5	53.2	34.1	1,812	3,096	137	838	1,419	2,394	702	3.72
1989/90*	9.7	76.6	62.1	32.8	2,038	2,758	165	850	1,300	2,315	443	3.70-3.80
Rice												\$/cwt
1984/85	0.79	2.83	2.80	4,954	138.8	187.3	---	8/80.5	82.1	122.6	84.7	8.04
1985/86	1.24	2.51	2.49	5,414	134.9	201.8	---	8/85.8	58.7	124.5	77.3	6.53
1986/87	1.48	2.38	2.36	5,651	133.4	213.3	---	8/77.7	84.2	161.9	51.4	3.75
1987/88	1.57	2.36	2.33	5,555	129.6	184.0	---	8/80.4	72.2	152.6	31.4	7.27
1988/89	1.09	2.93	2.90	5,514	159.9	195.4	---	8/83.2	85.6	168.8	26.7	6.83
1989/90*	1.21	2.73	2.69	5,749	154.5	186.2	---	8/85.2	82.0	167.2	18.0	7.00-7.50
Corn												\$/bu.
1984/85	3.9	80.5	71.9	106.7	7,674	8,684	4,079	1,091	1,885	7,036	1,648	2.93
1985/86	5.4	83.4	75.2	118.0	8,877	10,538	4,095	1,180	1,241	6,498	4,040	2.23
1986/87	14.3	76.7	69.2	119.3	8,250	12,291	4,714	1,192	1,504	7,410	4,882	1.50
1987/88	23.0	65.7	59.2	119.8	7,131	12,016	4,805	1,229	1,723	7,757	4,259	1.94
1988/89*	20.5	67.6	58.3	84.6	4,829	9,191	3,987	1,245	2,028	7,260	1,930	2.54
1989/90*	10.1	72.3	64.8	116.2	7,527	9,480	4,400	1,305	2,275	7,980	1,480	2.25-2.35
Sorghum												\$/bu.
1984/85	0.6	17.3	15.4	56.4	886	1,154	539	18	297	854	300	2.32
1985/86	0.9	18.3	16.8	66.8	1,120	1,420	664	28	178	869	551	1.93
1986/87	3.0	15.3	13.9	67.7	938	1,489	535	12	188	748	743	1.37
1987/88	4.1	11.8	10.5	69.4	731	1,474	555	25	231	811	683	1.70
1988/89*	3.9	10.4	9.0	63.8	577	1,239	466	22	310	800	440	2.27
1989/90*	2.0	11.9	11.2	65.4	618	1,057	525	15	250	790	267	2.05-2.15
Barley												\$/bu.
1984/85	0.5	12.0	11.2	53.4	599	799	304	170	77	551	247	2.29
1985/86	0.7	13.2	11.6	51.0	591	848	333	169	22	523	325	1.98
1986/87	2.1	13.1	12.0	50.8	611	944	298	174	137	808	336	1.61
1987/88	2.9	11.0	9.9	52.4	521	869	254	174	120	548	321	1.81
1988/89*	2.8	9.9	7.6	38.0	290	622	166	180	79	425	198	2.80
1989/90*	2.2	9.2	8.3	48.6	403	610	175	180	100	465	155	2.40-2.45
Oats												\$/bu.
1984/85	0.1	12.4	8.2	58.0	474	689	433	74	1	509	180	1.67
1985/86	0.1	13.3	8.2	63.7	521	728	460	82	2	544	184	1.23
1986/87	0.6	14.7	6.9	56.3	386	603	395	73	3	471	133	1.21
1987/88	0.8	18.0	6.9	54.0	374	552	358	81	1	440	112	1.58
1988/89*	0.3	13.9	5.5	39.3	218	393	194	100	1	294	98	2.61
1989/90*	0.3	12.1	6.9	64.4	374	532	300	110	1	411	122	1.45-1.55
Soybeans												\$/bu.
1984/85	0	67.8	66.1	28.1	1,851	2,037	0	1,030	598	1,721	316	5.84
1985/86	0	63.1	61.6	34.1	2,089	2,415	0	1,053	740	1,879	536	5.05
1986/87	0	60.4	58.3	33.3	1,640	2,476	0	1,179	757	2,040	436	4.78
1987/88	0	58.2	57.2	33.9	1,638	2,374	0	1,174	802	2,072	302	5.88
1988/89*	0	58.9	57.4	27.0	1,549	1,851	0	1,058	627	1,869	182	7.42
1989/90*	0	60.5	59.4	32.4	1,927	2,109	0	1,095	590	1,779	330	5.45-5.65
Soybean oil												7/ Cts./lb.
1984/85	---	---	---	---	11,466	12,209	---	9,917	1,660	11,577	632	29.50
1985/86	---	---	---	---	11,617	12,257	---	10,053	1,257	11,310	947	18.00
1986/87	---	---	---	---	12,783	13,745	---	10,833	1,187	12,020	1,725	15.40
1987/88	---	---	---	---	12,974	14,895	---	10,930	1,873	12,803	2,092	22.85
1988/89*	---	---	---	---	11,737	13,967	---	10,591	1,661	12,252	1,715	21.10
1989/90*	---	---	---	---	12,270	14,000	---	11,300	1,500	12,800	1,200	19.5-21.5
Soybean meal												9/ \$/ton
1984/85	---	---	---	---	24,529	24,784	---	19,480	4,917	24,397	387	125
1985/86	---	---	---	---	24,851	25,338	---	19,090	6,036	25,126	212	155
1986/87	---	---	---	---	27,756	27,970	---	20,387	7,343	27,730	240	163
1987/88	---	---	---	---	28,060	28,300	---	21,293	6,854	28,147	153	222
1988/89*	---	---	---	---	24,943	25,100	---	19,798	5,129	24,927	173	233
1989/90*	---	---	---	---	26,177	26,350	---	21,450	4,650	26,100	250	180-180

See footnotes at end of table.

Table 17.—Supply &amp; Utilization, continued

	Area			Yield	Production	Total supply 4/	Feed and residual	Other domestic use	Exports	Total use	Ending Stocks	Farm price 5/
	Set Aside 3/	Planted	Harvested									
	Mli. acres			Lb./acre		Mli. bales						
Cotton 10/												
1984/85	2.5	11.1	10.4	900	13.0	15.8	—	5.5	6.2	11.8	4.1	58.70
1985/86	3.6	10.7	10.2	830	13.4	17.6	—	6.4	2.0	8.4	9.4	56.60
1986/87	4.2	10.0	8.5	552	9.7	19.1	—	7.4	6.7	14.1	5.0	52.40
1987/88	4.0	10.4	10.0	706	14.8	19.8	—	7.6	5.6	14.2	5.8	64.30
1988/89	2.2	12.5	11.9	619	15.4	21.2	—	7.8	6.2	13.9	7.1	56.60
1989/90	3.5	10.8	9.5	619	12.2	19.3	—	8.2	7.7	15.9	3.5	—

March 9, 1990 Supply and Demand Estimates. 1/ Marketing year beginning June 1 for wheat, barley, & oats, August 1 for cotton & rice, September 1 for soybeans, corn, & sorghum, October 1 for soybean meal & soybean oil. 2/ Conversion factors: Hectares (ha.) = 2.471 acres, 1 metric ton = 2,204.622 pounds, 36.7437 bushels of wheat or soybeans, 39.3679 bushels of corn or sorghum, 45.9298 bushels of barley, 68.8944 bushels of oats, 22.048 cwt of rice, and 4.59480-pound bales of cotton. 3/ Includes diversion, PIK, acreage reduction, 50-92, & 0-92 programs. 4/ Includes imports. 5/ Market average prices do not include an allowance for loans outstanding & Government purchases. 6/ Residual included in domestic use. 7/ Average of crude soybean oil, Decatur. 8/ Includes 106 million pounds in imports for 1987/88, 140 million in 1988/89, and 15 million in 1989/90. 9/ Average of 44 percent, Decatur. 10/ Upland & extra long staple. Stocks estimates based on Census Bureau data, resulting in an unaccounted difference between supply & use estimates & changes in ending stocks. — = not available or not applicable.

Information contact: Commodity Economics Division, Crops Branch (202) 786-1840.

Table 18.—Food Grains

	Marketing year 1/				1989					1990
	1985/86	1986/87	1987/88	1988/89	Jan	Sept	Oct	Nov	Dec	Jan
Wholesale Prices										
Wheat, No. 1 HRW, Kansas City (\$/bu.) 2/	3.28	2.72	2.96	4.17	4.40	4.18	4.28	4.36	4.39	4.30
Wheat, DNS, Minneapolis (\$/bu.) 2/	3.25	2.82	2.92	4.25	4.42	4.23	NQ	NQ	NQ	NQ
Rice, S.W. La. (\$/cwt) 3/	16.11	10.25	19.25	14.85	14.00	15.60	15.55	15.00	14.60	15.60
Wheat										
Exports (mil. bu.)	915	1,004	1,592	1,424	120	180	93	78	85	—
Mill grind (mil. bu.)	703	755	753	778	65	66	72	69	62	—
Wheat flour production (mil. cwt)	314	335	336	348	29	30	32	30	27	—
Rice										
Exports (mil. cwt, rough equiv.)	58.7	84.2	72.2	85.6	10.0	8.5	8.6	8.2	9.6	—
	Marketing year 1/				1988					1989
	1986/87	1987/88	1988/89	Mar-May	Jun-Aug	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov
Wheat										
Stocks, beginning (mil. bu.)	1,905	1,821	1,261	1,923.5	1,260.8	2,253.8	1,715.9	1,227.7	701.6	1,917.2
Domestic use										
Food (mil. bu.)	712	721	735	174.6	183.3	197.3	178.3	176.0	192.7	196.0
Seed, feed & residual (mil. bu.) 4/	485	385	240	25.9	283.2	17.6	-46.9	-13.8	263.5	-19.6
Exports (mil. bu.)	999	1,598	1,419	467.3	361.6	329.0	360.5	366.0	368.9	328.8

1/ Beginning June 1 for wheat & August 1 for rice. 2/ Ordinary protein. 3/ Long grain, milled basis. 4/ Residual includes feed use. — = not available. NQ = no quote.

Information contacts: Ed Allen & Janet Livezey (202) 786-1840.

Table 19.—Cotton

	Marketing year 1/				1989					1990
	1985/86	1986/87	1987/88	1988/89	Jan	Sept	Oct	Nov	Dec	Jan
U.S. price, SLM, 1-1/16 in. (cts./lb.) 2/	60.0	53.2	63.1	57.7	55.7	68.5	69.4	68.3	63.6	62.2
Northern Europe prices Index (cts./lb.) 3/	48.9	62.0	72.7	66.4	63.1	81.8	82.1	82.1	77.3	74.9
U.S. M 1-3/32 in. (cts./lb.) 4/	64.8	61.8	76.3	69.2	67.2	83.0	83.3	82.1	76.3	74.3
U.S. mill consumption (1,000 bales)	6,398	7,452	7,617	7,782	648	725	763	702	551	709
Exports (1,000 bales)	1,989	6,684	6,582	6,148	483	492	522	520	683	—
Stocks, beginning (1,000 bales)	4,102	9,348	5,026	5,771	15,533	6,179	5,577	9,248	12,700	12,699

1/ Beginning August 1. 2/ Average spot market. 3/ Liverpool Outlook (A) Index; average of five lowest prices of 11 selected growths. 4/ Memphis territory growths. — = not available.

Information contact: Scon Sanford (202) 786-1840.



Table 20.—Feed Grains

	Marketing year 1/				1989					1990
	1985/86	1986/87	1987/88	1988/89	Jan	Sept	Oct	Nov	Dec	Jan
Wholesale prices										
Corn, no. 2 yellow, 30 day, Chicago (\$/bu.)	2.35	1.64	2.14	2.68	2.74	2.32	2.36	2.37	2.34	2.39
Sorghum, no. 2 yellow, Kansas City (\$/cwt)	3.72	2.73	3.40	4.17	4.24	4.73	3.91	4.00	3.98	4.00
Barley, feed, Duluth (\$/bu.) 2/	1.53	1.44	1.78	2.31	2.24	2.14	2.16	2.15	2.23	2.28
Barley, malting, Minneapolis (\$/bu.)	2.24	1.89	2.04	4.11	4.14	3.42	3.48	3.18	3.19	3.20
Exports 3/										
Corn (mil. bu.)	1,241	1,504	1,723	2,036	176.0	116.3	175	294	—	—
Feed grains (mil. metric tons) 4/	36.6	46.3	52.3	61.3	5.3	4.1	5.5	8.2	—	—
	Marketing year 1/				1988	1989				1990
	1985/86	1986/87	1987/88	1988/89	Sept-Nov	Dec-Feb	Mar-May	June-Aug	Sept-Nov	Dec-Feb
Corn										
Stocks, beginning (mil. bu.)	1,648	4,040	4,882	4,259	4,259	7,072	5,204	3,419	1,930	7,079
Domestic use										
Feed (mil. bu.)	4,095	4,714	4,805	3,979	1,334	1,082	849	690	1,497	1,231
Food, seed, ind. (mil. bu.)	1,180	1,192	1,229	1,245	294	284	337	330	300	300
Exports (mil. bu.)	1,241	1,504	1,723	2,036	482	508	800	470	582	692
Total use (mil. bu.)	6,496	7,410	7,757	7,260	2,109	1,869	1,787	1,490	2,379	2,223

1/ September 1 for corn & sorghum; June 1 for oats & barley. 2/ Beginning March 1987 reporting point changed from Minneapolis to Duluth. 3/ Includes products. 4/ Aggregated data for corn, sorghum, oats, & barley. P = preliminary. — not available.

Information contact: James Cole (202) 786-1840.

Table 21.—Fats &amp; Oils

	Marketing year *				1988	1989				
	1985/86	1986/87	1987/88	1988/89	Dec	Aug	Sept	Oct	Nov	Dec
Soybeans										
Wholesale price, no. 1 yellow, Chicago (\$/bu.)	5.20	5.03	6.67	7.41	7.74	5.98	5.80	5.61	5.76	5.74
Crushings (mil. bu.)	1,052.8	1,178.8	1,174.5	1,057.7	100.7	75.6	74.1	94.8	104.1	105.4
Exports (mil. bu.)	740.7	756.9	801.6	530.6	89.3	18.3	17.9	74.2	76.7	65.8
Stocks, beginning (mil. bu.)	316.0	536.4	436.4	302.5	137.4	31.0	23.8	24.5	96.3	108.5
Soybean oil										
Wholesale price, crude, Decatur (cts/lb.)	18.02	15.36	22.67	21.09	22.2	18.08	18.8	19.0	18.7	18.1
Production (mil. lb.)	11,617.3	12,783.1	12,974.5	11,737.0	1,110.4	855.0	843.0	1,057.3	1,145.7	1,161.2
Domestic disp. (mil. lb.)	10,045.9	10,820.2	10,734.1	10,455.6	753.7	1,031.3	931.6	1,134.2	1,045.4	975.2
Exports (mil. lb.)	1,257.3	1,184.5	1,873.2	1,658.2	119.9	181.1	265.6	123.9	82.5	113.4
Stocks, beginning (mil. lb.)	632.5	946.6	1,725.0	2,092.2	2,303.0	2,426.9	2,066.6	1,715.4	1,514.6	1,532.4
Soybean meal										
Wholesale price, 44% protein, Decatur (\$/ton)	154.88	162.61	221.90	233.46	246.00	215.50	217.10	191.80	183.40	179.4
Production (1,000 ton)	24,951.3	27,758.8	28,060.2	24,942.7	2,390.0	1,804.4	1,744.0	2,246.2	2,492.5	2,519.6
Domestic disp. (1,000 ton)	19,117.2	20,387.4	21,275.9	19,792.5	1,737.9	1,740.1	1,563.5	1,933.5	2,147.4	2,820.6
Exports (1,000 ton)	6,009.3	7,343.0	6,871.0	5,130.8	594.1	177.1	159.7	265.0	371.4	565.1
Stocks, beginning (1,000 ton)	386.9	211.7	240.2	153.5	295.6	264.9	152.0	172.9	220.5	194.3
Margarine, wholesale price, Chicago, white (cts/lb.)	51.2	40.3	40.3	52.3	55.3	51.6	52.20	51.7	52.1	52.4

\* Beginning September 1 for soybeans; October 1 for soybean meal & oil; calendar year for margarine.

Information contact: Roger Hoskin (202) 786-1840, Tom Bickerton (202) 786-1824.

Table 22.—Farm Programs, Price Supports, Participation &amp; Payment Rates

	Payment rates						Base acres 1/	Program 2/	Partici- pation rate 3/
	Target price	Loan rate	Findley loan rate	Deficiency	Paid land diversion	PIK			
						Percent 4/			
			\$/bu.				Mil. acres		Percent of base
Wheat									
1984/85	4.38	3.30	—	1.00	2.70	85	94.0	20/10/10-20	60/60/20
1985/86	4.38	3.30	—	1.08	2.70	—	94.0	20/10/0	73
1986/87 5/	4.38	3.00	2.40	1.98	2.00	1.10	91.6	22.5/2.5/5-10	85/85/21
1987/88	4.38	2.85	2.28	1.81	—	—	87.6	27.5/0/0	88
1988/89	4.23	2.78	2.21	0.69	—	—	84.8	27.5/0/0	88
1989/90	4.10	2.58	2.06	7/ .32	—	—	82.3	10/0/0	78
1990/91	4.00	2.44	1.95	—	—	—	—	* 5/0/0	—
Rice									
			\$/cwt						
1984/85	11.90	8.00	—	3.78	—	—	4.1	25/0/0	85
1985/86	11.90	8.00	6/ 3.18	3.90	3.50	—	4.2	20/15/0	90
1986/87 5/	11.90	7.20	6/ 3.82	4.70	—	—	4.2	35/0/0	94
1987/88	11.66	6.84	6/ 5.77	4.82	—	—	4.1	35/0/0	96
1988/89	11.15	6.83	6/ 6.30	4.31	—	—	4.1	25/0/0	94
1989/90	10.80	6.50	6/ 6.50	3.50	—	—	4.1	25/0/0	95
1990/91	10.71	6.50	—	—	—	—	—	20/0/0	95
Corn									
			\$/bu.						
1984/85	3.03	2.55	—	0.43	—	—	80.8	10/0/0	54
1985/86	3.03	2.55	—	0.48	—	—	84.2	10/0/0	69
1986/87 5/	3.03	2.40	1.82	1.11	—	—	81.7	17.5/2.5/0	86
1987/88	3.03	2.28	1.82	1.09	2.00	—	81.5	20/15/0	90
1988/89	2.93	2.21	1.77	7/ .36	1.75	—	82.9	20/10/0; 0/92	87
1989/90	2.84	2.06	1.85	7/ .84	—	—	82.7	10/0/0; 0/92	81
1990/91	2.75	1.96	1.57	—	—	—	—	10/0/0; 0/92	—
Sorghum									
			\$/bu.						
1984/85	2.88	2.42	—	0.46	—	—	18.4	8/ (same)	42
1985/86	2.88	2.42	—	0.46	—	—	19.3	—	55
1986/87 5/	2.88	2.28	1.82	1.08	0.85	—	19.0	—	75
1987/88	2.88	2.17	1.74	1.14	1.90	—	17.4	—	84
1988/89	2.78	2.10	1.68	0.48	1.65	—	16.8	—	82
1989/90	2.70	1.96	1.57	7/ .70	—	—	16.2	—	79
1990/91	2.81	1.86	1.49	—	—	—	—	—	—
Barley									
			\$/bu.						
1984/85	2.60	2.08	—	0.26	—	—	11.6	8/ (same)	44
1985/86	2.60	2.08	—	0.52	—	—	13.3	—	57
1986/87 5/	2.60	1.95	1.56	0.99	0.57	—	12.4	—	72
1987/88	2.60	1.86	1.49	0.79	1.60	—	12.5	—	84
1988/89	2.51	1.80	1.44	0.00	1.40	—	12.5	—	79
1989/90	2.43	1.68	1.34	7/ .23	—	—	12.4	—	69
1990/91	2.36	1.60	1.28	—	—	—	—	—	—
Oats									
			\$/bu.						
1984/85	1.60	1.31	—	0	—	—	9.8	8/ (same)	14
1985/86	1.60	1.31	—	0.29	—	—	9.4	—	14
1986/87 5/	1.60	1.23	0.99	0.39	0.36	—	9.2	—	37
1987/88	1.60	1.17	0.94	0.20	0.80	—	8.4	—	45
1988/89	1.55	1.13	0.90	11/ 0.00	—	—	7.9	5/0/0; 0/92	30
1989/90	1.50	1.06	0.85	0.00	—	—	7.8	5/0/0; 0/92	23
1990/91	1.45	1.01	0.81	—	—	—	—	5/0/0; 0/92	—
Soybeans 9/									
			\$/bu.						
1984/85	—	5.02	—	—	—	—	—	—	—
1985/86	—	5.02	—	—	—	—	—	—	—
1986/87 5/	—	4.77	—	—	—	—	—	—	—
1987/88	—	4.77	—	—	—	—	—	—	—
1988/89	—	4.77	—	—	—	—	—	—	—
1989/90	—	4.53	—	—	—	—	—	10/ 10/25	—
Upland cotton									
			Cts./lb.						
1984/85	81.0	55.00	—	18.60	—	—	15.6	25/0/0	70
1985/86	81.0	57.30	—	23.70	30.00	—	15.9	20/10/0	82/0/0
1986/87 5/	81.0	55.00	11/ 44.00	26.00	—	—	15.5	25/0/0	93
1987/88	79.4	52.25	12/ —	17.3	—	—	14.5	25/0/0	93
1988/89	75.9	51.80	12/ —	19.4	—	—	14.5	12.5/0/0	89
1989/90	73.4	50.00	12/ —	11.4	—	—	14.8	25/0/0	89
1990/91	72.9	50.27	12/ —	—	—	—	—	12.5/0/0	—

1/ Includes planted area plus acres considered planted (ARP, PLD, 0-92 etc). Net of CRP. 2/ Percentage of base acres that farmers participating in Acreage Reduction Program/Paid Land Diversion/PIK were required to devote to conserving uses to receive program benefits. 3/ Percentage of base acres enrolled in Acreage Reduction Program/Paid Land Diversion/PIK. 4/ Percent of program yield, except 1986/87 wheat, which is dollars per bushel. 1984 PIK rates apply only to the 10-20 portion. 5/ Rates for payments received in cash were reduced by 4.3 percent in 1986/87 due to Gramm-Rudman-Hollings. 6/ Annual average world market price. 7/ Guaranteed to farmers signed up for 0/92. 8/ The sorghum, oats, & barley programs were the same as for corn in each year except 1988-90, when the oats ARP was lower than for the other feed grains. 9/ There are no target prices, acreage programs, or payment rates for soybeans. 10/ Soybean program data refers to percent of program crop base permitted to shift into beans without loss of base. 11/ Loan repayment rate. 12/ Loans may be repaid at the lower of the loan rate or world market prices. \*On September 13, the Secretary announced that participating farmers have the option of planting up to 105 percent of their wheat base to boost 1990 supplies. For every acre planted in excess of 95 percent of base, the acreage used to compute deficiency payments will be cut by 1 acre. — = not available.

Information contact: James Cole (202) 786-1840.



Table 23.—Fruit

	1981	1982	1983	1984	1985	1986	1987	1988	1989 P
Citrus 1/									
Production (1,000 ton)	15,105	12,139	13,882	10,832	10,525	11,058	11,994	12,791	13,200
Per capita consumpt. (lbs.) 2/	104.4	109.3	120.0	102.8	109.1	117.3	112.8	113.6	—
Noncitrus 3/									
Production (1,000 tons)	13,332	14,659	14,154	14,291	14,189	13,918	16,011	15,872	16,090
Per capita Consumpt. (lbs.) 2/	88.0	89.2	88.7	93.9	91.8	96.4	101.5	97.7	—
1989									
	Jan	June	July	Aug	Sept	Oct	Nov	Dec	Jan
F.o.b. shipping point prices									
Apples (\$/carton) 4/	11.28	7.86	9.55	11.31	10.49	8.31	—	9.00	8.83
Pears (\$/box) 5/	9.70	14.38	—	—	—	11.10	—	11.75	12.00
Grower prices									
Oranges (\$/box) 6/	6.38	8.10	5.04	3.91	5.62	6.22	6.47	5.63	4.70
Grapelruit (\$/box) 6/	4.35	4.85	4.62	5.63	6.10	8.18	5.54	5.18	4.62
Stocks, ending									
Fresh apples (mil. lbs.)	2,659.7	347.3	174.9	8.0	2,522.0	4,501.9	3,845.8	3,220.6	2,571.7
Fresh pears (mil. lbs.)	234.8	6.4	11.0	157.9	448.2	438.9	368.8	272.8	200.2
Frozen fruits (mil. lbs.)	834.5	621.4	722.5	850.3	863.9	955.1	909.3	805.2	720.7
Frozen orange juice (mil. lbs.)	980.9	1,299.9	1,140.0	946.9	808.4	693.1	667.7	749.6	938.2

1/ 1989 indicated 1988/89 season. 2/ Per capita consumption for total U.S. population, including military consumption of both fresh and processed fruit in fresh weight equivalent. 3/ Calendar year. 4/ Red delicious, Washington, extra fancy, canon tray pack, 125's. 5/ D'Anjou, Washington, standard box wrapped, U.S. no. 1, 135's. 6/ U.S. equivalent on-tree returns. p = preliminary. — = not available.

Information contact: Wynnicia Napper (202) 786-1885.

Table 24.—Vegetables

	Calendar year									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Production										
Total vegetables (1,000 cwt)	395,225	392,343	430,795	403,320	457,394	453,771	481,329	488,470	477,729	543,748
Fresh (1,000 cwt) 1/ 3/	179,416	183,456	193,452	185,561	202,608	204,146	215,999	230,913	237,978	240,421
Processed (tons) 2/ 3/	10,790,440	10,444,330	11,867,170	10,887,950	12,739,280	12,481,240	12,268,020	12,877,850	11,987,560	15,168,340
Mushrooms (1,000 lbs.)	469,676	517,146	490,828	561,531	595,681	587,958	614,393	631,819	667,367	—
Potatoes (1,000 cwt)	303,905	340,623	355,131	333,728	362,039	406,809	381,743	389,320	356,438	370,344
Sweetpotatoes (1,000 cwt)	10,953	12,799	14,833	12,083	12,902	14,573	12,368	11,611	10,945	11,499
Dry edible beans (1,000 cwt)	26,729	32,751	25,583	15,520	21,070	22,175	22,889	26,031	19,253	24,333
1989										
	Jan	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan
Shipments										
Fresh (1,000 cwt) 4/	18,041	35,676	31,223	21,599	21,914	15,030	16,605	21,968	17,487	17,106
Potatoes (1,000 cwt)	11,137	15,768	9,991	8,466	10,678	9,005	9,612	12,639	10,389	10,740
Sweetpotatoes (1,000 cwt)	246	190	20	19	187	288	333	789	451	231

1/ Includes fresh production of asparagus, broccoli, carrots, cauliflower, celery, sweet corn, lettuce, honeydews, onions, & tomatoes. 2/ Includes processing production of snap beans, sweet corn, green peas, tomatoes, cucumbers (for pickles), asparagus, broccoli, carrots, & cauliflower. 3/ Asparagus & cucumber estimates were not available for 1982 & 1983. 4/ Includes snap beans, broccoli, cabbage, carrots, cauliflower, celery, sweet corn, cucumbers, eggplant, lettuce, onions, bell peppers, squash, tomatoes, cantaloupes, honeydews, & watermelons. — = not available.

Information contacts: Shannon Hamm or Cathy Greene (202) 786-1884.

Table 25.—Other Commodities

	Annual					1989				
	1985	1986	1987	1988	1989	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec
Sugar										
Production 1/	5,969	6,257	7,309	7,087	6,827	3,594	1,824	677	617	3,709
Deliveries 1/	8,035	7,786	8,167	8,188	8,309	2,107	1,902	2,056	2,161	2,190
Stocks, ending 1/	3,128	3,225	3,195	3,132	2,933	3,134	3,413	2,351	1,224	2,933
Coffee										
Composite green price N.Y. (cts/lb.)	137.46	185.18	109.14	115.59	95.17	120.75	126.67	118.01	72.29	63.70
Imports, green bean equiv. (mil. lbs.) 2/	2,550	2,598	2,638	2,072	2,630	472	586	535	784	725
1989										
	Annual			1988						
	1985	1987	1988	Nov	June	July	Aug	Sept	Oct	Nov
Tobacco										
Prices at auctions 3/										
Flue-cured (\$/lb.)	1.52	1.59	1.61	1.55	—	—	—	1.74	1.70	1.58
Burley (\$/lb.)	1.60	1.56	1.61	1.62	—	—	—	—	—	1.67
Domestic consumption 4/										
Cigarettes (bil.)	584.0	575.0	562.5	56.3	51.5	28.8	47.2	44.4	48.2	—
Large cigars (mil.)	3,055	2,728	2,531	209.7	255.0	166.1	231.0	216.2	211.4	—

1/ 1,000 short tons, raw value. Quarterly data shown at end of each quarter. 2/ Net imports of green & processed coffee. 3/ Crop year July-June for flue-cured, Oct.-Sept. for burley. 4/ Taxable removals. — = not available.

Information contacts: Margaret Hargrett (202) 786-1884, Robert J. Fink (202) 786-1888, Rebecca Verner Grise (202) 786-1890.

## World Agriculture

Table 26.—World Supply &amp; Utilization of Major Crops, Livestock, &amp; Products

	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89 P	1989/90 F
Million units							
<b>Wheat</b>							
Area (hectares)	228.9	231.2	229.8	228.2	219.9	218.0	225.5
Production (metric tons)	489.3	511.9	500.1	530.8	501.7	501.4	535.2
Exports (metric tons) 1/	102.0	107.0	85.0	90.7	105.0	97.5	98.3
Consumption (metric tons) 2/	474.0	493.0	496.2	522.5	530.9	530.5	538.7
Ending stocks (metric tons) 3/	145.1	184.0	188.3	176.4	147.2	118.1	114.8
<b>Coarse grains</b>							
Area (hectares)	335.0	334.8	341.3	337.3	323.8	324.8	323.1
Production (metric tons)	688.1	815.8	842.7	833.7	792.1	728.3	798.2
Exports (metric tons) 1/	93.4	100.4	83.2	84.1	83.7	94.5	100.1
Consumption (metric tons) 2/	759.3	782.8	778.4	807.9	812.8	796.9	824.3
Ending stocks (metric tons) 3/	110.7	143.9	208.2	234.0	213.3	144.7	118.8
<b>Rice, milled</b>							
Area (hectares)	144.1	144.1	144.8	145.1	141.4	145.5	145.9
Production (metric tons)	307.9	318.8	318.8	318.3	313.7	330.1	340.2
Exports (metric tons) 4/	12.4	11.4	12.8	12.9	11.9	15.2	13.6
Consumption (metric tons) 2/	304.5	310.8	319.5	322.8	319.9	327.8	335.5
Ending stocks (metric tons) 3/	48.8	54.9	54.9	50.8	44.8	47.3	82.0
<b>Total grains</b>							
Area (hectares)	708.0	709.9	715.5	710.6	684.9	688.3	694.5
Production (metric tons)	1,485.3	1,648.5	1,661.6	1,682.8	1,607.5	1,559.8	1,673.8
Exports (metric tons) 1/	207.8	218.8	180.8	187.7	200.6	207.2	212.0
Consumption (metric tons) 2/	1,537.8	1,588.2	1,594.1	1,653.2	1,663.5	1,655.0	1,698.5
Ending stocks (metric tons) 3/	302.4	362.8	431.4	481.2	405.3	310.1	285.2
<b>Oilseeds</b>							
Crush (metric tons)	135.8	150.7	155.0	181.4	187.2	185.8	173.0
Production (metric tons)	165.0	191.1	198.1	194.3	208.9	202.0	213.8
Exports (metric tons)	33.0	33.1	34.5	37.7	39.5	31.5	34.3
Ending stocks (metric tons)	15.7	21.1	28.8	23.5	24.0	21.9	22.9
<b>Meals</b>							
Production (metric tons)	92.5	101.8	105.0	110.4	114.5	111.9	117.7
Exports (metric tons)	29.7	32.3	34.4	36.7	38.4	38.0	39.3
<b>Oils</b>							
Production (metric tons)	42.1	48.2	49.3	50.3	52.9	53.8	56.2
Exports (metric tons)	13.7	15.8	18.4	18.9	17.7	18.1	18.9
<b>Cotton</b>							
Area (hectares)	31.0	33.9	31.9	29.9	31.1	34.0	32.8
Production (bales)	65.8	88.2	79.8	70.4	81.1	84.4	80.1
Exports (bales)	19.2	20.2	20.2	26.0	23.2	25.8	25.6
Consumption (bales)	68.3	70.0	75.8	82.5	84.1	84.8	85.6
Ending stocks (bales)	24.0	42.4	47.2	35.0	32.2	31.3	25.3
	1984	1985	1986	1987	1988	1989 P	1990 F
<b>Red meat</b>							
Production (metric tons)	99.8	103.7	108.7	109.7	113.2	113.5	114.2
Consumption (metric tons)	97.8	101.8	105.4	107.9	111.3	111.8	112.4
Exports (metric tons) 1/	8.0	8.4	8.7	8.7	7.0	7.0	7.2
<b>Poultry</b>							
Production (metric tons)	25.2	28.2	27.4	29.3	30.2	31.3	32.6
Consumption (metric tons)	25.0	25.8	27.0	28.7	29.8	30.9	32.1
Exports (metric tons) 1/	1.3	1.2	1.3	1.5	1.7	1.7	1.7
<b>Dairy</b>							
Milk production (metric tons)	413.0	413.4	419.0	427.1	429.8	431.3	437.0

1/ Excludes intra-EC trade. 2/ Where stocks data not available (excluding USSR), consumption includes stock changes. 3/ Stocks data are based on differing marketing years & do not represent levels at a given date. Data not available for all countries; includes estimated change in USSR grain stocks but not absolute level. 4/ Calendar year data. 1984 data correspond with 1983/84, etc. P = preliminary. F = forecast.

Information contacts: Crops, Frederic Surle (202) 786-1824; red meat & poultry, Linda Bailey (202) 786-1286; dairy, Sara Short (202) 786-1789.



# U.S. Agricultural Trade

## Table 27.—Prices of Principal U.S. Agricultural Trade Products

	Annual			1989							1990
	1987	1988	1989	Jan	Aug	Sept	Oct	Nov	Dec	Jan	
Export commodities											
Wheat, f.o.b. vessel, Gulf ports (\$/bu.)	3.11	3.97	4.65	4.75	4.49	4.47	4.50	4.57	4.62	4.59	
Corn, f.o.b. vessel, Gulf ports (\$/bu.)	1.95	2.73	2.85	3.03	2.58	2.62	2.73	2.79	2.79	2.70	
Grain sorghum, f.o.b. vessel, Gulf ports (\$/bu.)	1.88	2.52	2.70	2.81	2.54	2.63	2.60	2.64	2.65	2.60	
Soybeans, f.o.b. vessel, Gulf ports (\$/bu.)	5.55	7.81	7.06	8.09	6.28	6.13	5.95	6.18	6.22	6.07	
Soybean oil, Decatur (cts./lb.)	15.85	23.52	20.21	20.98	17.86	18.59	18.73	19.51	19.10	19.55	
Soybean meal, Decatur (\$/ton)	175.57	234.75	218.59	248.76	214.70	218.65	191.83	183.78	179.82	171.86	
Cotton, 8-market avg. spot (cts./lb.)	64.35	57.25	63.78	55.67	60.99	68.46	69.70	68.28	63.56	62.21	
Tobacco, avg. price at auction (cts./lb.)	144.32	147.93	181.08	182.27	158.50	185.83	182.98	180.89	181.23	160.77	
Rice, f.o.b. mill, Houston (\$/cwt)	13.15	19.60	15.68	15.00	16.50	16.50	16.50	16.00	15.67	15.50	
Inedible tallow, Chicago (cts./lb.)	13.79	16.64	14.86	14.71	13.52	14.13	15.25	14.75	14.25	14.87	
Import commodities											
Coffee, N.Y. spot (\$/lb.)	1.09	1.21	1.04	1.46	0.78	0.78	0.71	0.72	0.70	0.72	
Rubber, N.Y. spot (cts./lb.)	50.65	59.20	50.65	55.95	47.21	48.13	48.08	45.64	44.82	44.72	
Cocoa beans, N.Y. (\$/lb.)	0.87	0.89	0.55	0.84	0.55	0.49	0.46	0.44	0.42	0.44	

Information contact: Mary Teymourian (202) 786-1820.

## Table 28.—Indexes of Real Trade-Weighted Dollar Exchange Rates<sup>1</sup>

	1989								1990	
	May	June	July P	Aug P	Sept P	Oct P	Nov P	Dec P	Jan P	Feb P
	1985 = 100									
Total U.S. trade 2/	73.2	74.7	72.0	72.8	73.9	71.7	71.1	69.4	67.5	66.7
Agricultural trade										
U.S. markets	81.0	82.2	80.6	82.0	82.5	80.8	80.7	79.5	78.8	78.4
U.S. competitors	88.7	88.7	87.5	86.3	85.8	84.8	83.9	82.5	81.8	81.4
Wheat										
U.S. markets	93.7	93.6	93.2	96.2	95.9	94.2	93.4	92.3	91.5	91.6
U.S. competitors 3/	88.6	88.9	86.2	83.9	83.2	82.0	81.3	80.6	79.6	79.1
Soybeans										
U.S. markets	72.8	74.4	72.3	72.8	73.7	71.8	71.5	70.0	68.9	68.4
U.S. competitors 3/	109.4	106.1	105.1	95.4	90.8	90.3	88.5	88.2	88.4	88.6
Corn										
U.S. markets	72.2	73.9	72.3	74.0	74.7	73.1	73.3	72.4	72.1	72.1
U.S. competitors 3/	105.7	105.3	99.5	93.5	91.3	89.7	89.2	87.2	86.2	85.6
Cotton										
U.S. markets	76.2	77.4	76.3	76.4	76.9	75.7	75.9	75.5	75.3	75.1
U.S. competitors	84.6	84.3	83.4	89.5	88.1	85.8	84.4	82.8	81.4	81.5

1/ Real indexes adjust nominal exchange rates for differences in rates of inflation, to avoid the distortion caused by high-inflation countries. A higher value means the dollar has appreciated. See the October 1988 issue of Agricultural Outlook for a discussion of the calculations and the weights used. 2/ Federal Reserve Board Index of trade-weighted value of the U.S. dollar against 10 major currencies. Weights are based on relative importance in world financial markets. 3/ Substantial devaluations of the Argentine austral and Brazilian cruzado resulted in a sharp increase in the April, 1989, & subsequent values of these indices. P = preliminary.

Information contact: Tim Baxter, David Stallings (202) 786-1706.

## Table 29.—Trade Balance

	Fiscal year 1/							Dec
	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ million							
Exports								
Agricultural	34,769	38,027	31,201	26,312	27,976	35,379	39,651	38,000
Nonagricultural	159,373	170,014	178,236	179,291	202,911	258,593	302,507	26,150
Total 2/	194,142	208,041	210,437	205,603	230,787	293,972	342,158	—
Imports								
Agricultural	18,373	18,916	19,740	20,884	20,850	21,014	21,479	21,000
Nonagricultural	230,527	297,736	313,722	342,846	367,374	409,138	441,072	—
Total 3/	248,900	316,652	333,462	363,730	388,024	430,152	462,551	—
Trade balance								
Agricultural	18,396	19,111	11,461	5,428	7,226	14,365	18,172	17,000
Nonagricultural <sup>4</sup>	-71,154	-127,722	-134,486	-183,555	-184,483	-150,545	-138,565	—
Total	-52,758	-108,611	-123,025	-158,127	-157,237	-136,180	-120,393	—

1/ Fiscal years begin October 1 & end September 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 2/ Domestic exports including Department of Defense shipments (F.A.S. value). 3/ Imports for consumption (customs value). F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.

Table 30.—U.S. Agricultural Exports &amp; Imports

	Fiscal year*			Dec	Fiscal year*			Dec
	1988	1989	1990 F	1989	1988	1989	1990 F	1989
	1,000 unite				\$ million			
EXPORTS								
Animals, live (no.) 1/	430	758	—	63	452	475	—	53
Meats & preps., excl. poultry (mt)	631	869	0	77	1,797	2,355	—	177
Dairy products (mt)	388	594	—	3	536	475	600	21
Poultry meats (mt)	390	466	500	46	424	514	—	44
Fats, oils, & greases (mt)	1,362	1,377	3/1,400	122	545	531	—	44
Hides & skins incl. furskins	—	—	—	—	1,837	1,713	—	147
Cattle hides, whole (no.) 1/	20,817	28,260	—	2,173	1,458	1,380	—	117
Mink pelle (no.) 1/	2,455	3,073	—	122	88	91	—	3
Grains & feeds (mt)	108,944	114,978	—	10,943	12,569	18,837	4/15,800	1,495
Wheat (mt)	40,517	37,702	33,000	2,225	4,469	6,006	5/5,400	362
Wheat flour (mt)	1,236	1,268	1,300	71	170	268	—	15
Rice (mt)	2,173	3,052	2,500	263	731	955	800	83
Feed grains, incl. products (mt)	53,117	61,094	63,500	7,303	5,193	7,379	6,700	831
Feeds & fodders (mt)	11,255	11,071	8/11,400	1,044	1,720	1,848	—	178
Other grain products (mt)	910	1,197	—	66	362	513	—	36
Fruits, nuts, end preps. (mt)	2,409	2,555	—	199	2,368	2,394	—	178
Fruit juices incl.	—	—	—	—	—	—	—	—
fraz. (1,000 hectoliters) 1/	5,497	4,997	—	365	252	264	—	20
Vegetables & preps. (mt)	1,821	2,482	—	155	1,280	1,546	—	148
Tobacco, unmanufactured (mt)	229	212	200	20	1,297	1,274	1,300	114
Cotton, excl. lintere (mt)	1,388	1,441	1,700	149	2,136	2,039	2,700	250
Seeds (mt)	286	514	—	47	415	500	500	80
Sugar, cane or beet (mt)	318	368	—	30	98	134	—	12
Oilseeds & products (mt)	29,688	21,090	—	2,474	7,758	8,824	5,600	608
Oilseeds (mt)	21,601	14,775	—	1,836	5,295	4,400	—	432
Soybeans (mt)	21,142	14,088	15,600	1,790	5,066	4,079	3,400	407
Protein meal (mt)	6,389	4,816	4,600	524	1,501	1,317	900	113
Vegetable oils (mt)	1,699	1,498	—	114	962	908	—	63
Essential oils (mt)	9	13	—	1	120	171	—	12
Other	610	612	—	74	1,495	1,605	—	159
Total	148,473	147,569	145,500	14,340	35,379	39,651	38,000	3,559
IMPORTS								
Animals, live (no.) 1/	2,238	2,484	—	363	729	740	700	119
Meats & preps., excl. poultry (mt)	1,280	1,092	—	93	2,788	2,433	—	236
Beef & veal (mt)	779	668	685	63	1,681	1,527	1,600	160
Pork (mt)	456	371	370	25	1,001	778	800	65
Dairy products (mt)	232	211	300	25	881	834	800	84
Poultry & products 1/	—	—	—	—	97	130	—	11
Fats, oils, & greases (mt)	20	14	—	1	19	14	—	1
Hides & skins, incl. furskins 1/	—	—	—	—	247	240	—	17
Wool, unmanufactured (mt)	56	62	—	6	292	319	—	25
Grains & feeds (mt)	3,075	3,468	3,200	312	868	1,139	1,100	101
Fruits, nuts, & preps., excl. juices (mt)	4,797	5,036	4,915	384	2,169	2,269	—	174
Bananas & plantains (mt)	3,030	3,039	3,050	249	820	851	800	70
Fruit juices (1,000 hectoliters) 1/	26,758	27,778	27,000	2,828	768	793	—	69
Vegetables & preps. (mt)	2,518	2,953	2,700	207	1,593	1,959	1,900	176
Tobacco, unmanufactured (mt)	217	169	280	16	611	521	500	42
Cotton, unmanufactured (mt)	36	13	—	1	9	8	—	1
Seeds (mt)	143	158	160	9	153	187	200	12
Nursery stock & cut flowers 1/	—	—	—	—	419	466	—	40
Sugar, cane or beet (mt)	1,078	1,630	—	85	372	620	—	34
Oilseeds & products (mt)	1,772	1,917	1,900	181	838	946	900	88
Oilseeds (mt)	208	424	—	47	71	159	—	16
Protein meal (mt)	253	359	—	30	42	65	—	5
Vegetable oils (mt)	1,311	1,133	—	103	725	721	—	66
Beverages excl. fruit	—	—	—	—	—	—	—	—
juices (1,000 hectoliters) 1/	15,583	13,967	—	985	2,008	1,815	—	139
Coffee, tea, cocoa, spices (mt)	1,841	1,888	—	158	4,274	3,896	—	247
Coffee, incl. products (mt)	1,050	1,084	1,200	103	2,600	2,467	2,300	152
Cocoa beans & products (mt)	562	564	550	37	1,164	999	900	61
Rubber & allied gums (mt)	846	927	850	62	949	1,051	1,000	52
Other	—	—	—	—	931	1,097	—	83
Total	—	—	—	—	21,014	21,479	21,000	1,750

\* Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. 1/ Not included in total volume. 2/ Forecasts for footnoted items 2/-6/ are based on slightly different groups of commodities. Fiscal 1988 exports of categories used in the 1989 forecasts were 2/ 561,000 m. tons. 3/ 1.347 million dollars 4/ 12,743 million. 5/ 4,638 million, i.e. includes flour. 6/ 11,095 million m. tons. F = forecast. — = not available.

Information contact: Stephen MacDonald (202) 786-1822.



Table 31.—U.S. Agricultural Exports by Region

Region & country	Fiscal year*			Dec 1989	Change from year* earlier			Dec 1989
	1988	1989	1990 F		1988	1989	1990 F	
	\$ million				Percent			
Western Europe	8,053	7,067	6,800	744	12	-12	-7	-11
European Community (EC-12)	7,536	6,558	6,100	708	11	-13	-8	-9
Belgium-Luxembourg	429	431	—	45	1	1	—	9
France	563	474	—	49	14	-16	—	-6
Germany, Fed. Rep.	1,315	918	—	66	4	-30	—	-23
Italy	713	603	—	83	-3	-16	—	28
Netherlands	2,103	1,847	—	186	8	-12	—	-14
United Kingdom	818	736	—	74	23	-10	—	-6
Portugal	340	307	—	33	25	-10	—	1
Spain, Incl. Canary Islands	848	876	—	109	29	3	—	-22
Other Western Europe	516	510	500	38	20	-1	0	-38
Switzerland	191	166	—	13	32	-13	—	12
Eastern Europe	559	422	500	20	23	-24	-25	-40
German Dem. Rep.	67	72	—	6	0	8	—	-34
Poland	167	45	—	4	165	-73	—	1
Yugoslavia	104	76	—	3	-21	-26	—	35
Romania	93	62	—	4	-19	-33	—	-37
USSR	1,940	3,299	3,200	378	194	70	-3	72
Asia	15,944	18,685	18,200	1,622	33	17	-3	0
West Asia (Mideast)	1,904	2,270	2,200	219	14	19	-4	1
Turkey	120	238	—	25	3	97	—	142
Iraq	735	791	900	88	39	8	12	27
Israel	334	265	—	15	37	-21	—	-67
Saudi Arabia	464	482	500	53	-5	4	0	-18
South Asia	805	1,171	—	60	133	45	—	-48
Bangladesh	107	213	—	0	-3	98	—	-95
India	354	243	—	5	281	-31	—	-84
Pakistan	276	609	400	51	181	121	67	-21
China	613	1,494	1,200	90	161	144	-20	-39
Japan	7,274	8,152	8,200	675	31	12	0	-2
Southeast Asia	1,022	974	—	68	44	-5	—	-14
Indonesia	245	216	—	17	61	-12	—	-24
Philippines	345	344	400	11	33	0	33	-47
Other East Asia	4,326	4,623	4,500	511	24	7	-2	34
Taiwan	1,577	1,594	1,600	234	16	1	-6	63
Korea, Rep.	2,259	2,453	2,500	225	33	9	0	18
Hong Kong	488	575	600	51	12	18	0	12
Africa	2,272	2,281	2,300	176	27	0	0	-20
North Africa	1,659	1,798	1,800	142	30	8	0	-24
Morocco	193	216	—	27	-2	12	—	0
Algeria	537	549	600	40	120	2	20	-50
Egypt	786	955	900	52	3	21	-10	-31
Sub-Saharan	613	483	500	35	21	-21	0	-3
Nigeria	44	30	—	3	-35	-31	—	-32
Rep. S. Africa	85	57	—	4	74	-34	—	44
Latin America & Caribbean	4,401	5,442	5,100	412	17	24	-6	-14
Brazil	176	152	600	12	-58	-13	0	81
Caribbean Islands	867	1,007	—	91	5	16	—	-8
Central America	414	448	—	28	10	8	—	-12
Colombia	178	139	—	10	55	-22	—	90
Mexico	1,726	2,757	2,400	197	42	60	-14	-14
Peru	174	81	—	28	24	-54	—	187
Venezuela	597	587	600	29	30	-2	-17	-61
Canada	1,973	2,187	2,200	173	11	11	0	-7
Oceania	237	268	300	33	3	13	0	46
Total	35,379	39,651	38,000	3,559	27	12	-4	-2
Developed countries	17,905	18,000	17,500	1,639	19	1	-3	-7
Less developed countries	14,362	16,436	15,600	1,433	25	14	-5	-1
Centrally planned countries	3,111	5,215	4,900	488	131	68	-6	22

\*Fiscal years begin Oct. 1 & end Sept. 30. Fiscal year 1989 began Oct. 1, 1988 & ended Sept. 30, 1989. F = forecast. — = not available.  
 Note: Adjusted for transshipments through Canada.

Information contact: Stephan MacDonald (202) 786-1822.

## Farm Income

Table 32.—Farm Income Statistics

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
1. Farm receipts	142.0	144.1	147.1	141.1	146.8	149.1	140.8	145.3	157.2	163	167 to 172
Crops (incl. net CCC loans)	71.7	72.5	72.3	67.1	69.5	74.3	64.0	63.8	72.6	74	78 to 82
Livestock	68.0	69.2	70.3	69.4	73.0	69.8	71.6	75.7	78.9	83	83 to 85
Farm related 1/	2.3	2.5	4.5	4.5	4.4	5.0	5.1	5.8	5.7	6	5 to 7
2. Direct Government payments	1.3	1.9	3.5	9.3	8.4	7.7	11.8	16.7	14.5	11	8 to 10
Cash payments	1.3	1.9	3.5	4.1	4.0	7.6	8.1	6.6	7.1	9	7 to 9
Value of PIK commodities	0.0	0.0	0.0	5.2	4.5	0.1	3.7	10.1	7.4	2	1 to 2
3. Total gross farm income (4+5+6) 2/	149.3	166.4	163.5	153.1	174.9	166.4	160.4	171.6	177.6	192	188 to 194
4. Gross cash income (1+2)	143.3	146.0	150.6	150.4	155.2	158.9	152.5	162.0	171.6	174	178 to 182
5. Nonmoney income 3/	12.3	13.8	14.3	13.5	13.4	11.8	10.6	10.0	10.3	10	9 to 11
6. Value of inventory change	-8.3	6.6	-1.4	-10.9	6.3	-2.4	-2.7	-0.4	-4.3	7	1 to 3
7. Cash expenses 4/	109.1	113.2	112.8	113.5	116.6	110.2	100.7	107.5	114.4	121	121 to 123
8. Total expenses	133.1	139.4	140.0	140.4	142.7	134.0	122.4	128.0	135.0	143	142 to 146
9. Net cash income (4-7)	34.2	32.8	37.8	36.9	38.6	46.7	51.8	54.5	57.2	53	54 to 58
10. Net farm income (3-8)	16.1	26.9	23.5	12.7	32.2	32.4	38.0	43.8	42.7	49	45 to 49
Deflated (1982\$)	18.6	28.6	23.5	12.2	29.9	29.2	33.4	37.2	35.2	39	34 to 38
11. Off-farm income	34.7	35.6	36.4	37.0	38.9	42.6	44.6	46.6	51.7	54	52 to 62
12. Loan changes 5/: Real estate	9.9	9.1	3.6	2.3	-1.1	-6.0	-9.0	-7.5	-4.4	-2	-1 to 1
13.       5/: Non-real estate	5.3	6.5	3.4	0.9	-0.6	-9.6	-11.0	-4.6	-0.3	-1	0 to 3
14. Rental income plus monetary change	6.1	6.4	6.3	5.3	8.9	8.8	7.6	8.8	8.5	8	7 to 9
15. Capital expenditures 5/	18.0	16.8	13.3	12.7	12.5	9.2	8.5	8.8	10.2	12	10 to 14
16. Net cash flow (9+12+13+14-15)	37.6	37.8	38.1	32.7	33.1	30.7	31.2	39.4	50.6	47	50 to 58

1/ Income from machine hire, custom work, sales of forest products, & other miscellaneous cash sources. 2/ Numbers in parentheses indicate the combination of items required to calculate a given item. 3/ Value of home consumption of self-produced food & imputed gross rental value of farm dwellings. 4/ Excludes capital consumption, perquisites to hired labor, & farm household expenses. 1987 & 1988 expenses include preliminary revisions from the 1987 Census of Agriculture. 5/ Excludes farm households. Totals may not add because of rounding. F = forecast

Information contact: Diane Bertelsen (202) 786-1808.

Table 33.—Balance Sheet of the U.S. Farming Sector

	Calendar year 1/ 2/										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ billion										
<b>Assets</b>											
Real estate	782.4	784.7	748.6	738.7	637.7	555.9	507.3	577.0	607.9	648	675 to 685
Non-real estate	213.2	212.0	212.2	205.6	209.0	190.5	182.2	167.8	202.5	201	200 to 210
Livestock & poultry	80.6	53.5	53.0	49.7	49.6	46.3	47.6	57.9	65.7	67	66 to 70
Machinery & motor vehicles	93.1	101.4	102.0	100.8	98.9	87.6	80.3	73.9	74.7	76	75 to 79
Crops stored 3/	33.0	29.1	27.7	23.9	29.7	23.6	19.1	20.9	28.2	22	19 to 23
Financial assets	28.6	26.0	29.6	31.3	32.6	33.0	35.2	35.2	35.9	36	36 to 38
Total farm assets	995.6	996.7	991.0	944.3	846.7	746.4	689.5	764.9	810.4	849	880 to 890
<b>Liabilities</b>											
Real estate debt 4/	89.6	98.7	102.5	104.6	103.6	97.6	88.6	81.1	76.7	76	73 to 77
Non-real estate debt 5/	77.1	63.6	67.0	67.9	67.1	77.6	66.6	62.0	61.7	61	60 to 64
Total farm debt	166.8	162.3	169.6	162.7	160.7	175.1	155.1	143.1	138.4	136	134 to 140
Total farm equity	828.9	834.4	821.5	781.6	686.0	571.3	534.4	621.8	672.0	713	740 to 750
	Percent										
<b>Selected ratios</b>											
Debt-to-assets	16.8	16.3	19.7	20.4	22.5	23.5	22.5	18.7	17.1	16	15 to 16
Debt-to-equity	20.1	22.4	24.6	25.6	29.1	30.8	29.0	23.0	20.6	19	18 to 19
Debt-to-net cash income	488	556	497	523	493	375	299	248	231	256	240 to 250

1/ As of Dec. 31. 2/ Estimates of farm assets and equity for 1987-1990 reflect revisions in real estate assets based on the 1987 Census of Agriculture. Revisions in real estate assets for 1983-1986 have not been completed. 3/ Non-CCC crops held on farms plus value above loan rates for crops held under CCC. 4/ Excludes debt on operator dwellings, but includes CCC storage and drying facilities loans. 5/ Excludes debt for nonfarm purposes. F = forecast.

Information contacts: Ken Erickson or Jim Ryan (202) 786-1798.



Table 34.—Cash Receipts From Farm Marketings, by State

Region & State	Livestock & products				Crops 1/				Total 1/			
	1988	1989	Nov 1989	Dec 1989	1988	1989	Nov 1989	Dec 1989	1988	1989	Nov 1989	Dec 1989
	\$ million 2/											
<b>North Atlantic</b>												
Maine	216	223	19	20	188	234	24	21	404	457	42	41
New Hampshire	60	60	5	5	77	77	7	6	137	138	12	11
Vermont	352	375	34	36	53	52	12	7	405	428	45	43
Massachusetts	105	105	9	9	297	303	48	30	402	408	57	39
Rhode Island	13	13	1	1	65	66	4	9	78	79	5	11
Connecticut	180	183	16	18	202	217	15	14	382	400	31	30
New York	1,781	1,917	176	185	824	782	87	68	2,605	2,699	243	253
New Jersey	192	192	18	16	450	435	38	28	642	627	54	44
Pennsylvania	2,348	2,566	220	236	935	977	106	78	3,284	3,542	327	313
<b>North Central</b>												
Ohio	1,604	1,747	158	164	2,025	2,028	259	184	3,629	3,775	417	348
Indiana	1,749	1,888	195	185	2,367	2,483	261	215	4,117	4,372	456	400
Illinois	2,243	2,310	244	239	4,218	4,486	349	426	6,461	6,796	592	665
Michigan	1,208	1,293	112	118	1,484	1,592	233	179	2,670	2,885	345	297
Wisconsin	4,281	4,573	425	448	787	909	120	88	5,048	5,481	545	536
Minnesota	3,364	3,629	348	346	2,743	2,863	470	328	6,107	6,492	818	674
Iowa	5,045	5,181	495	488	4,029	3,982	393	342	9,074	9,164	888	830
Missouri	2,011	2,152	240	194	1,814	1,750	167	138	3,826	3,903	428	332
North Dakota	849	871	74	55	1,574	1,467	207	163	2,423	2,338	282	218
South Dakota	1,965	2,019	219	164	945	907	92	64	2,911	2,926	311	228
Nebraska	5,336	5,562	547	436	2,843	2,909	248	290	7,979	8,470	831	726
Kansas	4,265	4,498	371	340	2,329	2,107	163	181	6,594	6,605	533	522
<b>Southern</b>												
Delaware	444	499	36	32	149	159	20	9	592	658	55	41
Maryland	768	828	63	65	459	483	61	32	1,228	1,311	124	97
Virginia	1,294	1,404	127	100	592	596	83	51	1,886	2,000	211	151
West Virginia	179	179	17	13	70	61	6	5	246	240	23	19
North Carolina	2,179	2,350	218	183	1,994	2,026	194	129	4,173	4,377	410	311
South Carolina	488	501	47	43	590	591	77	37	1,079	1,092	123	81
Georgia	2,011	2,184	169	170	1,533	1,554	202	100	3,544	3,738	370	270
Florida	1,114	1,182	104	95	4,697	4,285	243	368	5,811	5,467	347	464
Kentucky	1,538	1,601	272	90	992	1,111	269	177	2,530	2,711	542	267
Tennessee	1,080	1,110	90	84	965	912	208	110	2,046	2,022	298	194
Alabama	1,695	1,866	133	123	708	701	97	50	2,400	2,568	230	173
Mississippi	1,176	1,275	89	90	1,164	1,054	264	187	2,341	2,330	353	257
Arkansas	2,278	2,494	183	162	1,696	1,531	337	110	3,974	4,025	520	292
Louisiana	587	596	58	44	1,299	1,090	280	194	1,885	1,685	337	238
Oklahoma	2,284	2,428	239	174	1,127	1,154	88	105	3,410	3,582	325	279
Texas	8,498	6,792	592	488	3,783	4,099	395	393	10,281	10,892	987	881
<b>Western</b>												
Montana	818	853	118	64	570	693	89	86	1,388	1,546	207	150
Idaho	1,033	1,097	92	83	1,258	1,642	243	196	2,291	2,739	336	279
Wyoming	575	618	72	42	156	170	45	27	730	788	118	68
Colorado	2,655	2,747	272	175	1,037	1,265	145	138	3,692	4,013	418	313
New Mexico	910	924	123	51	362	413	53	35	1,272	1,337	176	86
Arizona	793	718	66	67	1,167	1,125	166	142	1,959	1,842	232	209
Utah	537	555	48	46	150	156	14	18	687	711	62	64
Nevada	150	151	10	11	79	87	10	9	229	238	20	20
Washington	1,141	1,211	104	99	2,146	2,309	192	166	3,287	3,520	296	265
Oregon	669	698	71	57	1,427	1,523	138	101	2,096	2,221	209	159
California	4,704	5,470	477	464	11,894	12,251	1,487	1,029	16,598	17,721	1,964	1,493
Alaska	10	10	1	1	20	21	2	2	30	31	3	3
Hawaii	89	89	7	7	479	454	38	38	568	542	46	46
<b>United States</b>	<b>78,862</b>	<b>83,786</b>	<b>7,817</b>	<b>6,848</b>	<b>72,569</b>	<b>74,142</b>	<b>8,783</b>	<b>6,883</b>	<b>151,431</b>	<b>157,926</b>	<b>16,600</b>	<b>13,730</b>

1/ Sales of farm products include receipts from commodities placed under CCC loans minus value of redemptions during the period. 2/ Estimates as of end of current month. Totals may not add because of rounding.

Information contact: Roger Strickland (202) 786-1804.

Table 35.—Cash Receipts From Farming

	Annual						1988	1989				
	1984	1985	1986	1987	1988	1989	Dec	Aug	Sept	Oct	Nov	Dec
	\$ million											
Farm marketings & CCC loans*	142,439	144,135	135,539	139,468	151,431	157,928	13,048	12,125	14,805	16,258	16,600	13,730
Livestock & products	72,968	69,845	71,534	75,717	78,862	83,786	6,289	6,731	7,060	8,071	7,817	6,846
Meat animals	40,832	38,589	39,122	44,276	45,976	47,675	3,417	3,851	4,028	5,085	4,519	3,617
Dairy products	17,944	18,063	17,753	17,710	17,068	19,338	1,637	1,569	1,566	1,683	1,770	1,920
Poultry & eggs	12,223	11,211	12,661	11,480	12,864	14,471	1,084	1,152	1,259	1,153	1,219	1,164
Other	1,969	1,982	1,997	2,252	2,354	2,302	151	159	207	150	309	145
Crops	69,471	74,290	64,005	63,751	72,569	74,142	6,759	5,394	7,545	10,187	8,783	8,883
Food grains	9,740	8,993	5,638	5,581	7,700	8,114	571	851	762	714	650	579
Feed crops	15,668	22,520	17,161	13,102	15,291	16,781	1,335	1,302	1,634	2,258	1,848	1,698
Cotton (lint & seed)	3,674	3,687	3,805	4,087	4,668	5,027	1,185	85	466	788	1,145	828
Tobacco	2,813	2,722	1,918	1,827	2,039	2,153	217	448	480	368	311	184
Oil-bearing crops	13,641	12,474	10,571	11,159	13,099	12,211	937	419	1,120	2,982	1,713	1,071
Vegetables & melons	9,138	8,558	8,826	9,718	9,819	10,456	518	1,023	1,205	1,133	559	480
Fruits & tree nuts	6,733	6,857	7,246	6,257	6,877	8,757	854	657	972	1,036	1,054	826
Other	8,066	8,381	9,041	10,020	10,476	10,642	1,161	809	926	908	1,533	1,209
Government payments	8,430	7,704	11,813	16,747	14,480	9,499	468	113	222	959	926	56
Total	150,869	151,839	147,352	156,215	165,911	167,427	13,516	12,238	14,827	19,217	17,526	14,29

\* Receipts from loans represent value of commodities placed under CCC loans minus value of redemptions during the month.

Information contact: Roger Strickland (202) 786-1804.

Table 36.—Farm Production Expenses

	Calendar year										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989 F	1990 F
	\$ million										
Feed	20,971	20,855	18,592	21,725	19,852	18,015	18,179	18,898	22,462	24,000	20,000 to 23,000
Livestock	10,670	8,999	9,584	8,814	9,498	8,958	9,744	11,845	12,812	13,000	12,000 to 15,000
Seed	3,220	3,428	3,172	2,993	3,448	3,360	2,984	3,009	3,138	4,000	3,000 to 5,000
Farm-origin inputs	34,861	33,282	31,448	33,532	32,798	30,323	28,907	33,752	38,412	41,000	37,000 to 41,000
Fertilizer	9,491	9,409	8,018	7,087	7,429	7,258	5,787	6,210	7,000	8,000	7,000 to 9,000
Fuels & oils	7,879	8,570	7,888	7,503	7,143	6,584	4,790	5,042	5,144	6,000	5,000 to 7,000
Electricity	1,526	1,747	2,041	2,148	2,166	2,150	1,842	2,393	2,572	3,000	2,000 to 3,000
Pesticides	3,539	4,201	4,282	4,154	4,767	4,994	4,484	4,588	4,716	5,000	5,000 to 6,000
Manufactured inputs	22,435	23,927	22,229	20,870	21,505	20,986	17,003	18,233	19,432	22,000	22,000 to 24,000
Short-term interest	8,717	10,722	11,349	10,815	10,396	8,821	7,795	7,305	7,287	8,000	7,000 to 9,000
Real estate interest 1/	7,544	9,142	10,481	10,815	10,733	9,878	9,131	8,187	7,885	7,000	6,000 to 8,000
Total interest charges	16,261	19,864	21,830	21,430	21,129	18,699	16,926	15,492	15,172	15,000	14,000 to 18,000
Repair & maintenance 1/ 2/	7,075	7,021	6,428	6,529	6,416	6,370	6,426	6,546	6,858	7,000	7,000 to 8,000
Contract & hired labor	9,293	8,931	10,075	9,725	9,729	9,799	9,890	10,821	11,202	11,000	11,000 to 12,000
Machine hire & custom work	1,823	1,984	2,025	1,896	2,170	2,184	1,810	1,956	2,171	2,000	2,000 to 3,000
Marketing, storage, & transportation	3,070	3,523	4,301	3,904	4,012	4,127	3,852	3,823	3,279	4,000	4,000 to 5,000
Misc. operating expenses 1/	6,881	6,909	7,262	9,089	9,106	8,232	7,993	8,306	8,809	9,000	8,000 to 10,000
Other operating expenses	28,142	28,368	30,089	31,143	31,433	30,712	29,771	31,452	32,319	34,000	33,000 to 37,000
Capital consumption 1/	21,474	23,573	24,287	23,873	23,105	20,847	19,918	17,664	17,722	18,000	18,000 to 20,000
Taxes 1/	3,891	4,246	4,036	4,469	4,059	4,231	4,125	4,345	4,378	4,000	4,000 to 5,000
Net rent to nonoperator landlord	6,075	6,184	6,059	5,080	6,640	8,158	6,737	7,080	7,527	8,000	8,000 to 9,000
Other overhead expenses	31,440	34,003	34,381	33,402	35,804	33,238	29,780	29,069	29,827	31,000	31,000 to 34,000
Total production expenses	133,139	139,444	139,980	140,377	142,869	133,956	122,387	127,998	134,963	143,000	142,000 to 146,000

1/ Includes operator dwellings. 2/ Beginning in 1982, miscellaneous operating expenses include other livestock purchases & dairy assessments. Totals may not add because of rounding. F = forecast. 1987 and 1988 expenses include preliminary revisions from the Census of Agriculture.

Information contacts: Chris McGath (202) 786-1804, Diane Berelsen (202) 786-1808.



Table 37.—CCC Net Outlays by Commodity &amp; Function

COMMODITY/PROGRAM	Fiscal year									
	1982	1983	1984	1985	1986	1987	1988	1989	1990 E	1991 E
	\$ million									
Feed grains	5,397	6,815	-758	5,211	12,211	13,967	9,053	3,384	4,270	6,099
Wheat	2,238	3,419	2,536	4,691	3,440	2,836	678	53	522	2,061
Rice	164	664	333	990	947	906	128	631	616	673
Upland cotton	1,190	1,383	244	1,553	2,142	1,786	866	1,461	-242	710
Tobacco	103	880	346	455	253	-346	-453	-367	-307	-138
Dairy	2,182	2,528	1,502	2,085	2,337	1,166	1,295	679	483	617
Soybeans	169	288	-585	711	1,597	-476	-1,676	-86	236	52
Peanuts	12	-6	1	12	32	8	7	13	-6	3
Sugar	-5	49	10	184	214	-85	-246	-25	0	0
Honey	27	48	90	81	89	73	100	42	69	44
Wool	54	94	132	109	123	152	1/ 15	93	121	120
Operating expense 3/	294	328	362	346	457	535	614	620	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export programs 4/	65	398	743	134	102	276	200	-102	102	67
1989/89 Disaster/										
Livestock Assistance	0	0	0	0	0	0	0	3,919	2/ 96	0
Other	-225	-1542	1,295	-314	486	371	1,695	143	979	536
Total	11,652	16,651	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739
FUNCTION										
Price-support loans (net)	7,015	8,438	-27	6,272	13,628	12,199	4,579	-928	431	704
Direct payments										
Deficiency	1,185	2,780	612	6,302	6,166	4,633	3,971	5,798	4,520	8,445
Diversification	0	705	1,504	1,525	64	382	8	-1	0	0
Dairy termination	0	0	0	0	489	587	260	168	178	108
Other	0	0	0	0	27	60	0	42	4	6
Disaster	306	115	1	0	0	0	6	4	0	0
Total direct payments	1,491	3,600	2,117	7,827	6,746	5,862	4,245	6,011	4,702	8,557
1988/89 crop disaster	0	0	0	0	0	0	0	3,386	2/ 6	0
Emergency livestock/										
forage assistance	16	0	0	0	0	0	31	533	90	0
Purchases (net)	2,031	2,540	1,470	1,331	1,670	-479	-1,131	116	-87	238
Producer storage										
payments	679	964	268	329	485	832	658	174	127	70
Processing, storage,										
& transportation	355	665	639	657	1,013	1,659	1,113	659	465	490
Operating expense 3/	294	328	362	346	457	535	614	620	626	633
Interest expenditure	-13	3,525	1,064	1,435	1,411	1,219	395	65	609	262
Export programs 4/	65	398	743	134	102	276	200	-102	102	67
Other	-281	-1,607	679	-648	329	305	1,757	-13	1,103	718
Total	11,652	18,851	7,315	17,683	25,841	22,408	12,461	10,523	8,174	11,739

1/ Fiscal 1988 wool & mohair program outlays were \$130,635,000 but include a one-time advance appropriation of \$128,108,000, which was recorded as a wool program receipt by Treasury. 2/ Benefits to farmers under the Disaster Assistance Act of 1989 are being paid in generic certificates & are not recorded directly as disaster assistance outlays. 3/ Does not include CCC Transfers to General Sales Manager. 4/ Includes Export Guarantee Program, Direct Export Credit Program, & CCC Transfers to the General Sales Manager. E = Estimated in the fiscal 1991 President's Budget. Minus (-) indicates a net receipt (excess of repayments or other receipts over gross outlays of funds).

Information contact: Richard Pazdalski (202) 447-5148.

## Food Expenditures

**Table 38.—Food Expenditure Estimates**

	Annual			1989		1990	1989 year-to-date		1990 year-to-date
	1987	1988	1989	Nov	Dec P	Jan P	Nov	Dec P	Jan
\$ billion									
Sales 1/									
Off-premise use 2/	245.5	257.9	275.8	23.1	25.6	22.3	250.1	275.7	22.3
Meals & snacks 3/	174.8	187.4	196.3	15.9	16.6	15.2	179.4	195.9	15.2
1988 \$ billion									
Sales 1/									
Off-premise use 2/	255.9	257.8	258.7	21.4	23.6	19.9	235.1	258.7	19.9
Meals & snacks 3/	181.9	187.3	187.3	14.9	15.6	14.2	171.8	187.3	14.2
Percent change from year earlier (\$ bil.)									
Sales 1/									
Off-premise use 2/	3.6	5.0	7.0	7.0	6.7	5.8	7.0	7.0	5.8
Meals & snacks 3/	10.2	7.2	4.5	2.4	0.1	2.1	5.0	4.5	2.1
Percent change from year earlier (1988 \$ bil.)									
Sales 1/									
Off-premise use 2/	-0.7	0.7	0.4	1.0	0.5	4.2	0.4	0.4	4.2
Meals & snacks 3/	6.0	3.0	0.0	-2.1	-3.7	2.2	0.3	0.0	2.2

1/ Food only (excludes alcoholic beverages). Not seasonally adjusted. 2/ Excludes donations & home production. 3/ Excludes donations, child nutrition subsidies, & meals furnished to employees, patients, & inmates. P = preliminary.

NOTE: This table differs from Personal Consumption Expenditures (PCE), table 2, for several reasons: (1) this series includes only food, not alcoholic beverages & per food, which are included in PCE; (2) this series is not seasonally adjusted, whereas PCE is seasonally adjusted at annual rates; (3) this series reports sales only, but PCE includes food produced & consumed on farms & food furnished to employees; (4) this series includes all sales of meals & snacks. PCE includes only purchases using personal funds, excluding business travel & entertainment. For a more complete discussion of the differences, see "Developing and Integrated Information System for the Food Sector," Agr.-Econ. Rpt. No. 575, Aug 1987.

Information contact: Alden Manchester (202) 786-1890.

## Transportation

**Table 39.—Rail Rates; Grain & Fruit/Vegetable Shipments**

	Annual			1989						1990
	1987	1988	1989	Jan	Aug	Sept	Oct	Nov	Dec	Jan
Rail freight rate index 1/ (Dec. 1984=100)										
All products	100.1	104.6	106.4	105.8	106.8	106.8	106.7 P	106.9 P	106.9 P	107.1 P
Farm products	99.3	105.6	108.4	108.9	108.2	108.2	108.2 P	108.4 P	108.5 P	107.1 P
Grain	98.7	105.4	108.7	109.2	108.4	108.4	108.4 P	108.7 P	108.7 P	109.2 P
Food products	98.6	103.2	103.9	103.6	104.1	104.1	104.1 P	104.1 P	104.3 P	105.8 P
Grain shipments										
Rail carloadings (1,000 cars) 2/	29.0	30.7	28.4	30.3	25.9 P	24.4 P	28.9 P	31.7 P	29.4 P	32.7 P
Fresh fruit & vegetable shipments										
Piggy back (1,000 cwt) 3/ 4/	588	535	504	373	454	462	406	440	459	466
Rail (1,000 cwt) 3/ 4/	630	607	589	714	215	415	472	584	725	704
Truck (1,000 cwt) 3/ 4/	9137	9,679	9,674	8,976	8,863	8,281	9,040	9,425	9,278	7,698
Cost of operating trucks										
hauling produce 5/										
Owner operator (cts./mile)	118.3	118.7	124.1	121.3	123.4	124.3	125.5	128.2	128.9	128.9
Fleet operation (cts./mile)	118.5	118.4	123.4	121.0	122.6	123.4	124.5	125.5	128.7	128.7

1/ Department of Labor, Bureau of Labor Statistics. 2/ Weekly average; from Association of American Railroads. 3/ Weekly average; from Agricultural Marketing Service, USDA. 4/ Preliminary data for 1988 & 1989. 5/ Office of Transportation, USDA. P = preliminary.

Information contact: T.O. Hutchinson (202) 786-1840.



## Indicators of Farm Productivity

**Table 40.—Indexes of Farm Production Input Use & Productivity**

(See the March 1990 Issue.)

Information contact: Jim Hauven (202) 786-1459.

## Food Supply and Use

**Table 41.—Per Capita Consumption of Major Food Commodities**

(See the January-February 1990 Issue.)

Information contact: Judy Putnam (202) 786-1870.

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